Zonet®

ZSR4154WS

802.11n
Wireless Broadband Router

USER MANUAL

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Chapter 1 Introduction

Welcome

Thank you for purchasing Zonet ZSR4154WS – 802.11n wireless broadband router! This high cost-efficiency router is the best choice for Small office / Home office users, all computers and network devices can share a single xDSL / cable modem internet connection at high speed. Easy install procedures allows any computer users to setup a network environment in very short time - within minutes, even inexperienced. When the number of your computers and network-enabled devices grow, you can also expand the number of network slot by simple attach a hub or switch, to extend the scope of your network!

All computers and IEEE 802.11b/g/n wireless-enabled network devices (including PDA, cellular phone, game console, and more!) can connect to ZSR4154WS without additional cabling. The MIMO technology also gives you the highest speed of wireless experience ever! With a compatible wireless card installed in your PC, you can transfer file for up to 150Mbps! The radio coverage is also doubled, so don't worry if your office or house is really big!

Moreover, the Zonet ZSR4154WS also can be managed or configured through Remote easy-to-use Web-based utility.

Contents of Package

- One ZSR4154WS
- One CD w/User Manual
- One Quick Installation Guide(English)
- One Quick Installation Guide(Spanish)
- One Power Adapter

Contact your local authorized reseller or the store purchased from for any items damaged and/or missing.

System Requirements

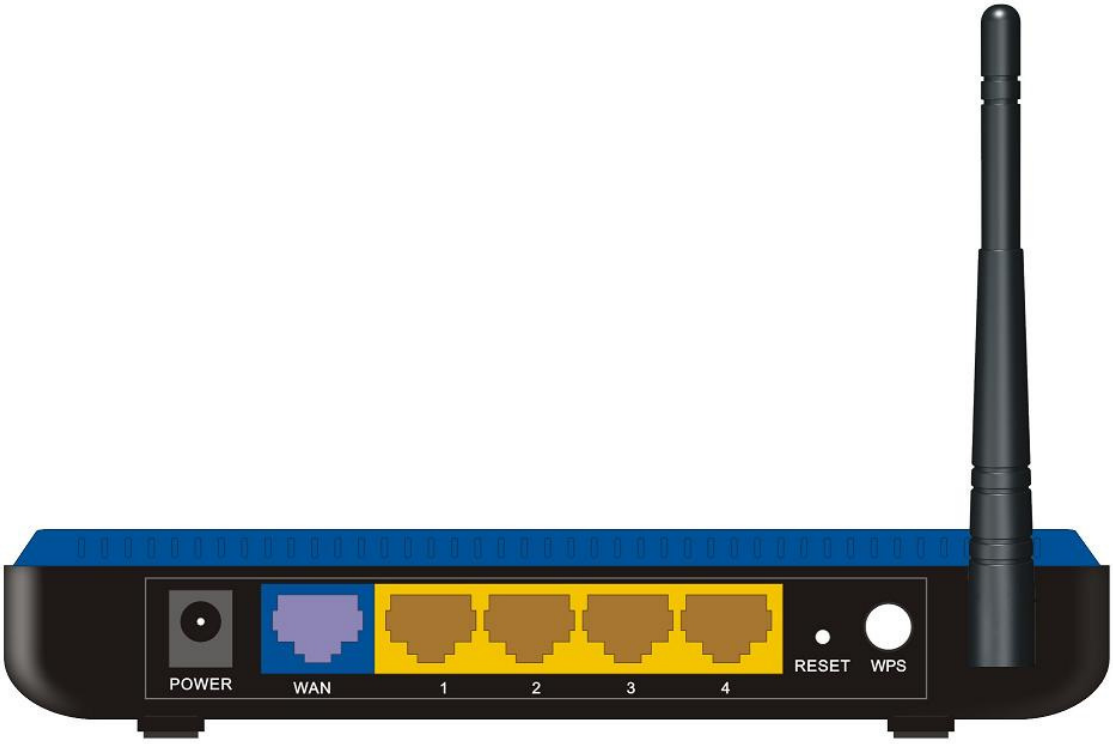
- Internet connection, provided by xDSL or cable modem with a RJ-45 Ethernet port.
- Computer or network devices with wired or wireless network interface card.
- Web browser (Microsoft Internet Explorer 6.0 or above, Firefox 2.0 or above).
- An available power socket (100–240V, 50/60Hz)

Getting to Know Your ZSR4154WS

Top Panel

LED Indicator	Status	Description
POWER	ON	ZSR4154WS is switched on and correctly powered
SYS	Flashing	Indicates the system works normally.
WAN	ON	Indicates WAN port is connected
	Flashing	Indicates WAN activity (transferring or receiving data)
WLAN	Flashing	Indicates the wireless signal is OK.
LAN(1/2/3/4)	ON	Indicates LAN port is connected
	Flashing	Indicates LAN activity (transferring or receiving data)
WPS	Flashing	Indicates ZSR4154WS is negotiating with WPS clients in WPS Mode (PBC or PIN).

Rear Panel

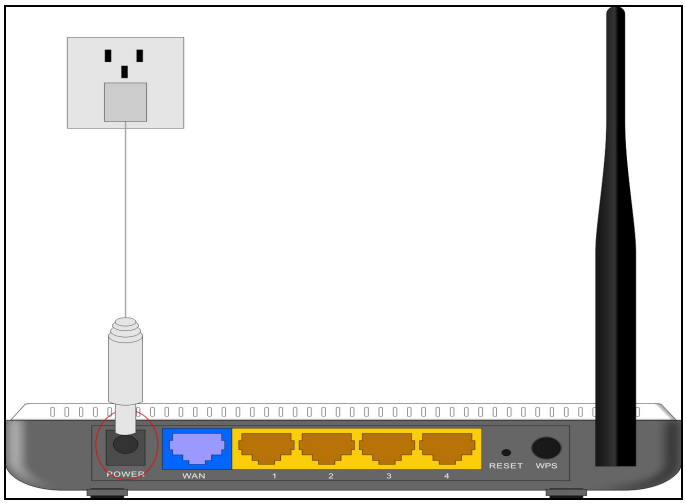


Item Name	Description
POWER	Power connector, connects to power adapter
WAN	Wide Area Network (WAN / Internet) port.
1-4 (LAN Ports)	Local Area Network (LAN) ports 1 to 4
RESET	Reset ZSR4154WS to factory default settings (clear all settings). Press this button and hold for 7 seconds to restore all settings to factory defaults.
WPS	Start WPS function. Press this button for 1 second to start WPS function.
Antenna	The antenna is fixed 3dBi dipole antenna.

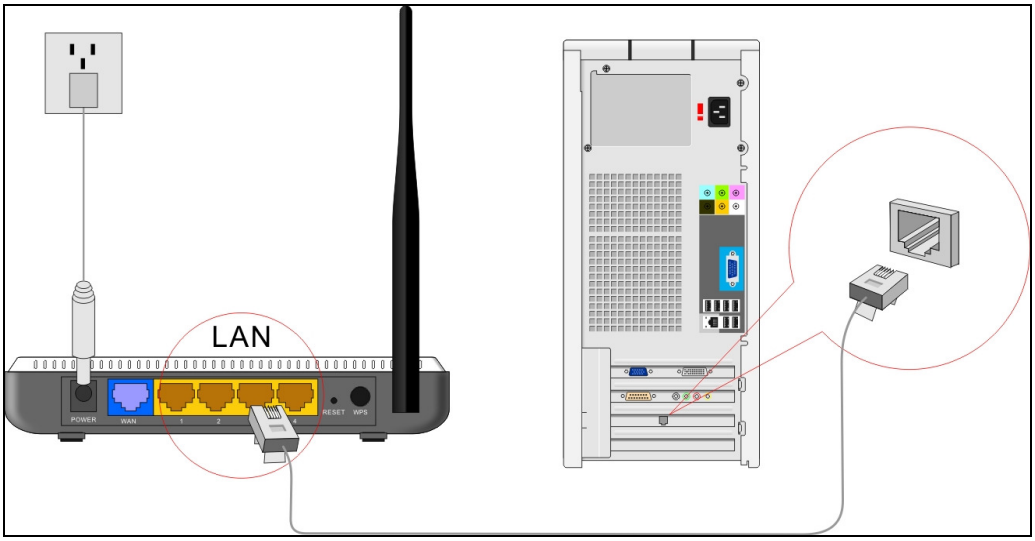
Chapter 2 Hardware Installation

Please follow the following instruction to build the network connection between your ZSR4154WS and your computers, network devices:

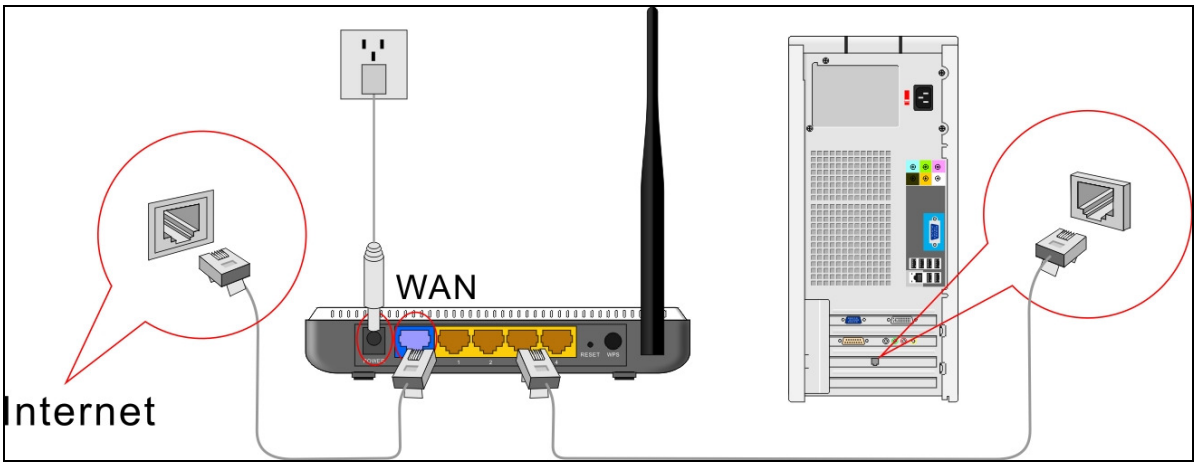
1. Connect the power adapter to the wall socket, and then connect it to the **Power** socket of ZSR4154WS.



2. Connect all your computers, network devices (network-enabled consumer devices other than computers, like game console, or switch / hub) to the **LAN** port of ZSR4154WS.



3. Connect your xDSL / cable modem to the **WAN** port of ZSR4154WS by Ethernet cable.

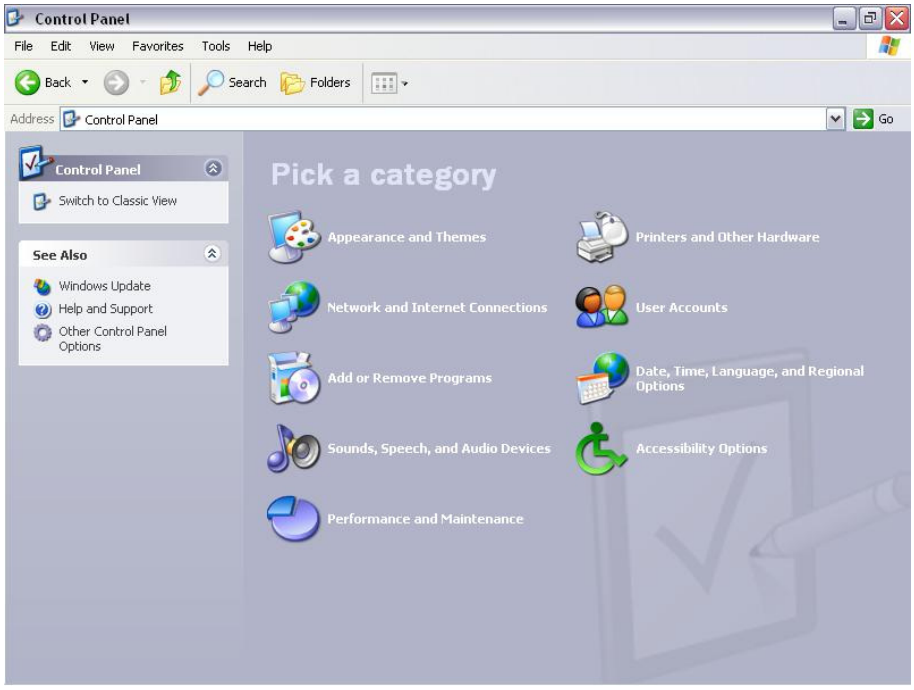


4. Please check all LEDs on the top panel. POWER LED should be steadily on, WAN and LAN LEDs should be on if the computer / network device connected to the respective port of ZSR4154WS is powered on and correctly connected. If any LED you expected is not on, please recheck the cabling, or jump to **"Troubleshooting"** for possible reasons and solution.

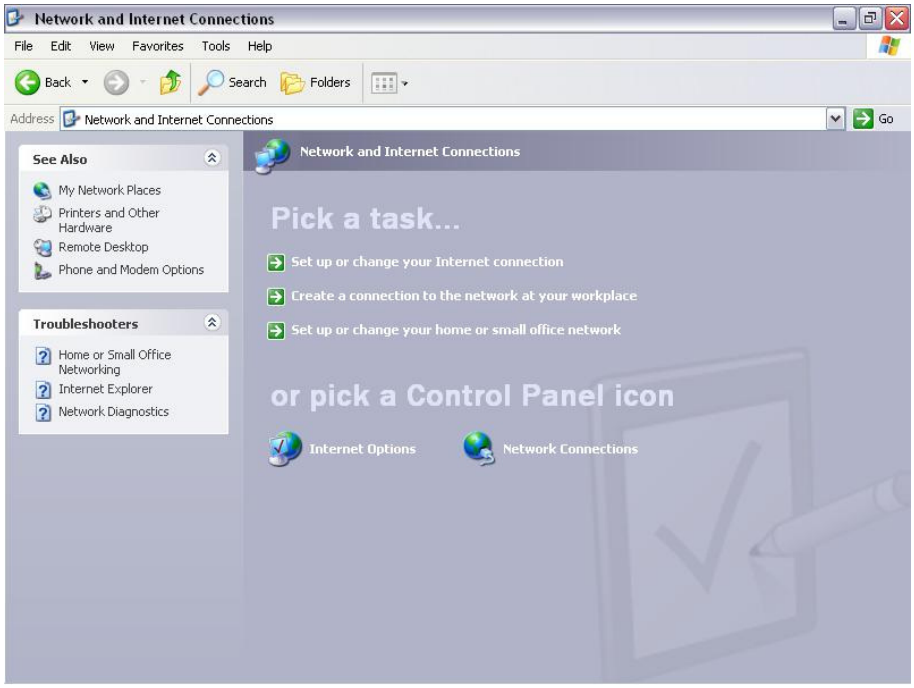
Chapter 3 Connect Your ZSR4154WS

How to Set the Network Configurations for My Computer

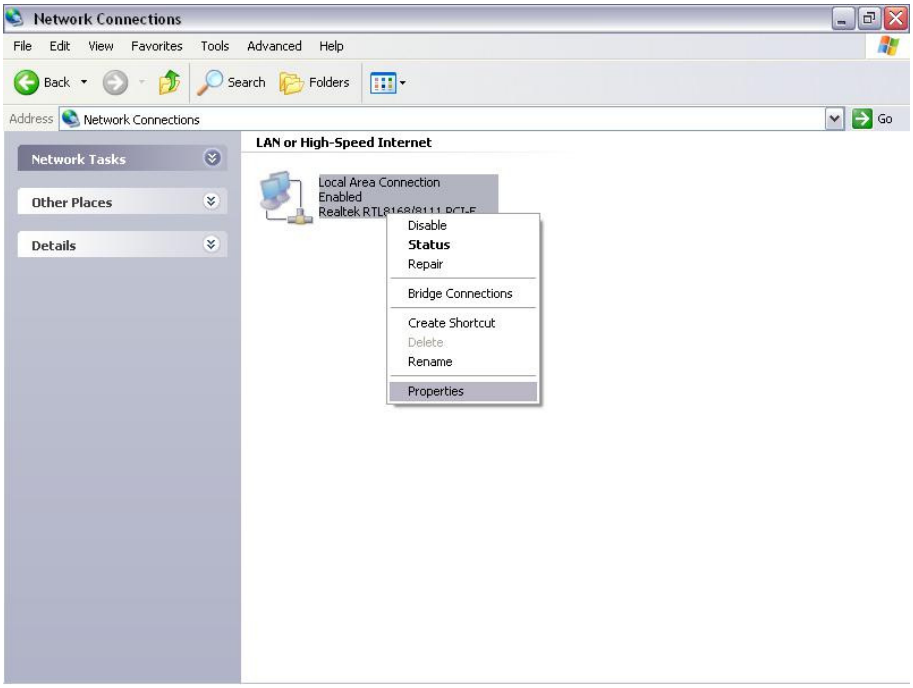
1. Click ***Start → Control Panel***



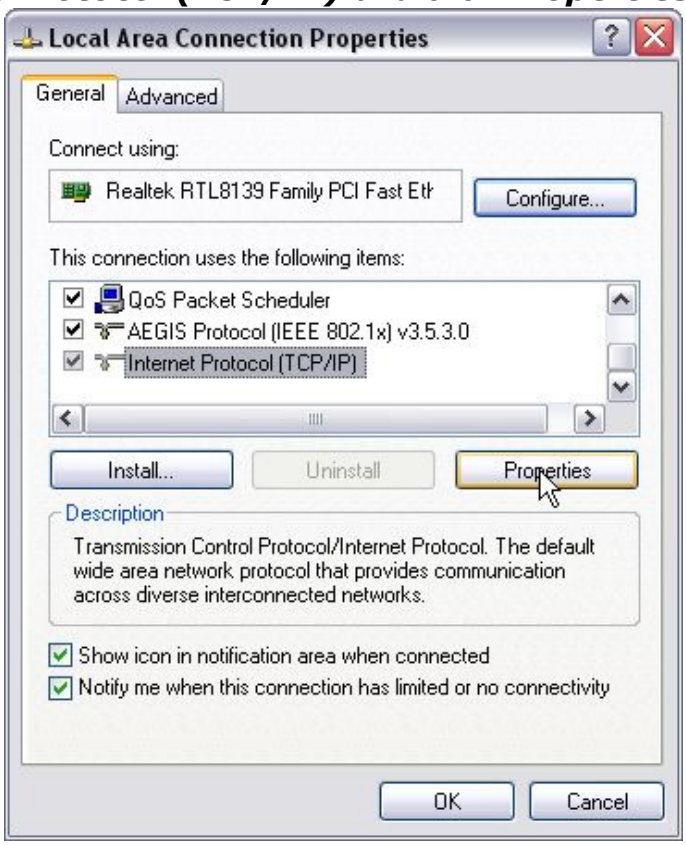
2. Click ***Network and Internet Connections → Network Connections***


Network and Internet Connections
File Edit View Favorites Tools Help
Back Search Folders
Address Network and Internet Connections
Go
See Also
My Network Places
Printers and Other Hardware
Remote Desktop
Phone and Modem Options
Troubleshooters
Home or Small Office Networking
Internet Explorer
Network Diagnostics
Network and Internet Connections
Pick a task...
Set up or change your Internet connection
Create a connection to the network at your workplace
Set up or change your home or small office network
or pick a Control Panel icon
Internet Options
Network Connections

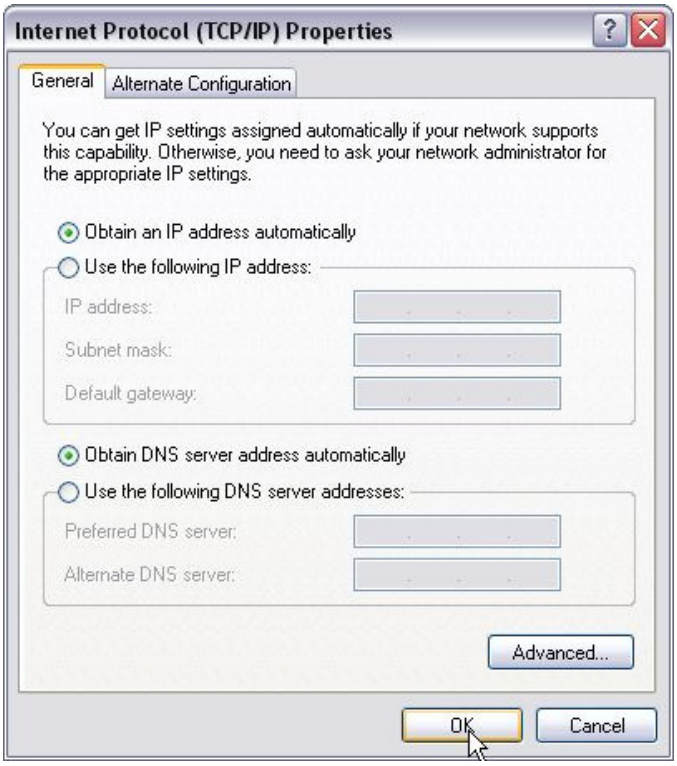
3. Right click ***Local Area Network Connection*** and select ***Properties***.



4. Select ***Internet Protocol (TCP/IP)*** and click ***Properties***.

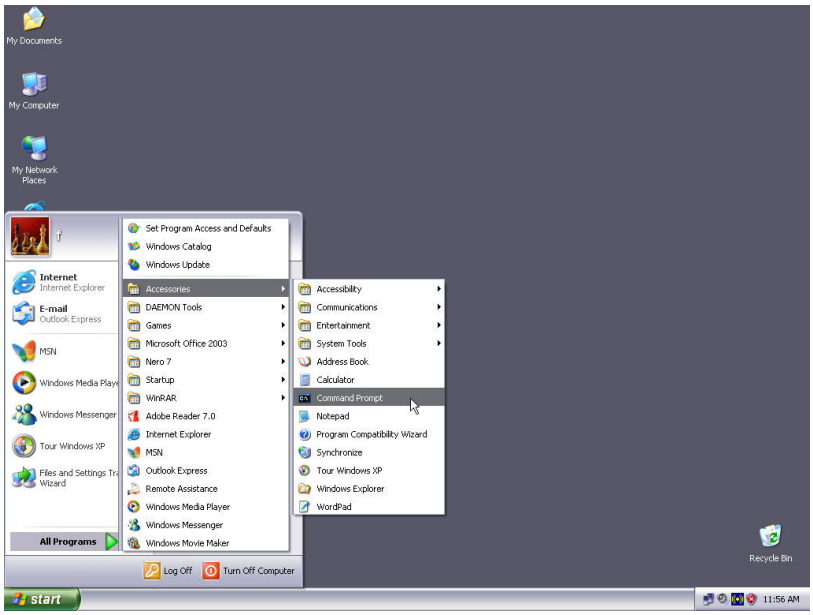


5. Select ***Obtain an IP address automatically*** and ***Obtain DNS server address automatically***. Click ***OK*** to save the configurations.


Internet Protocol (TCP/IP) Properties
General
Alternate Configuration
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

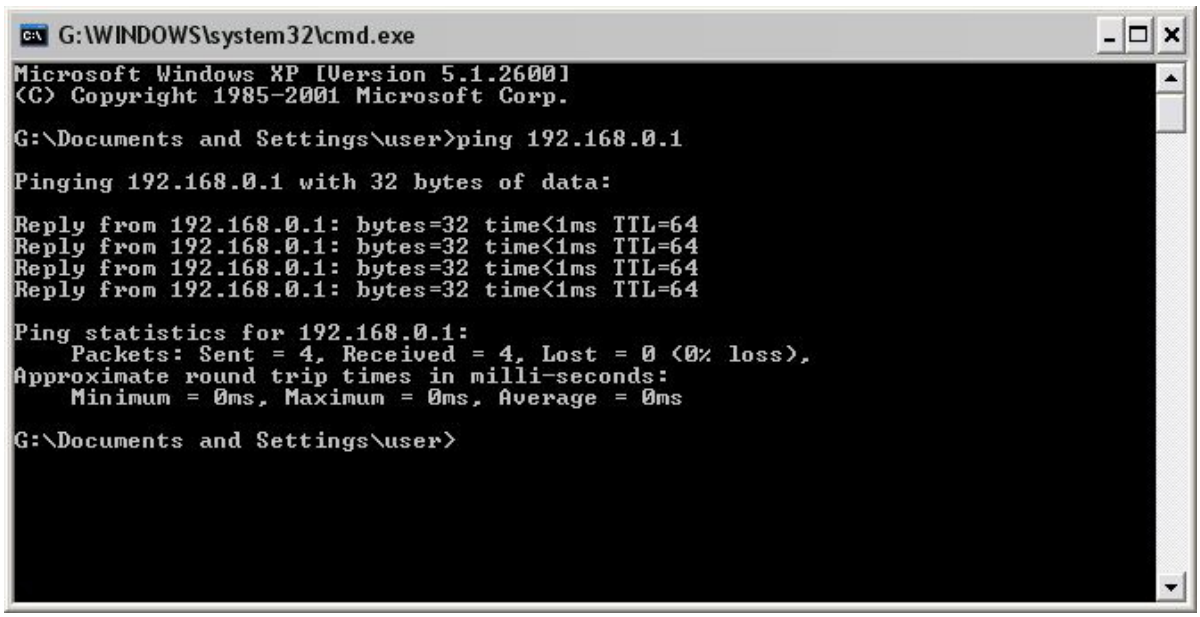
How to Check the Network Connection

1. Select ***Start*** → ***All Programs*** → ***Accessories*** → ***Command Prompt***.



2. Input ***ping 192.168.0.1*** and press ***Enter***. If the screen displays as below, it means your PC is connected to your router successfully.

   If not, please make sure the hardware installation and network adapter are OK.


G:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
G:\Documents and Settings\user>ping 192.168.0.1
Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
G:\Documents and Settings\user>

Chapter 4 Basic Configurations

This section is to show you how to configure your new ZSR4154WS through the Web-based Configuration Utility.

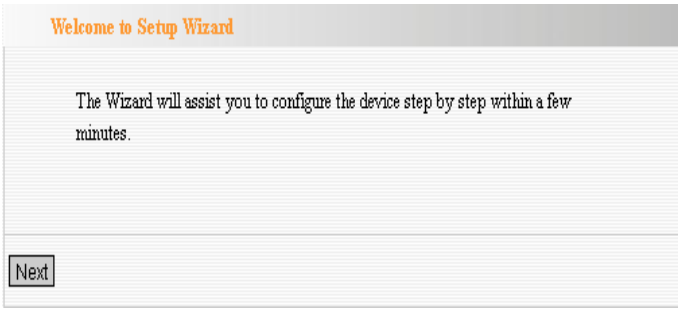
How to Access the Web-based Configuration Utility

1. After your computer obtained an IP address from ZSR4154WS, please start your web browser, and input the default IP address of ZSR4154WS http://192.168.0.1 in address bar.

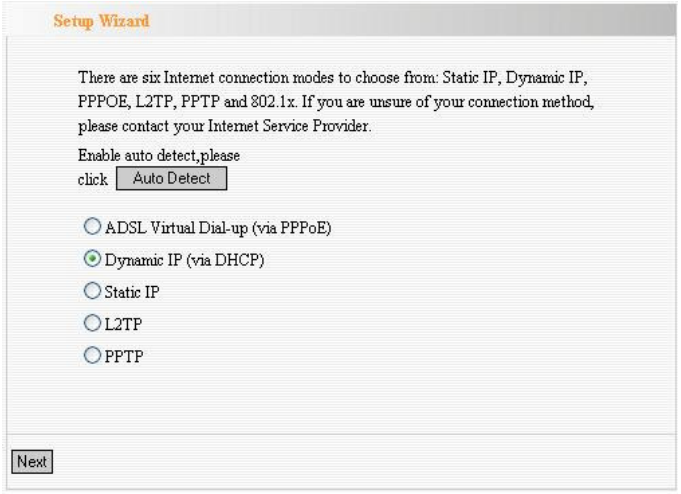
2. Please input user name and password and then click ***OK***.
   Both default user name and password is ***admin***.

Setup Wizard

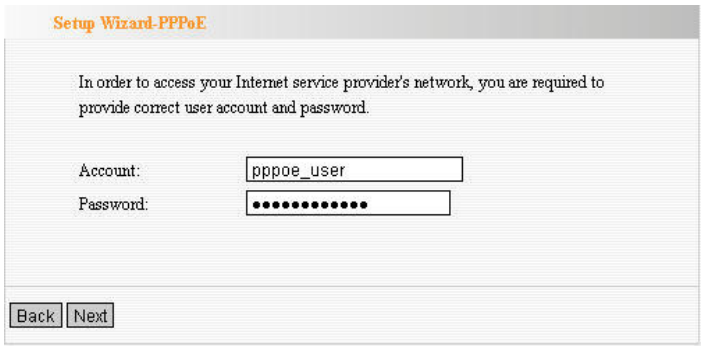
1. When ***Welcome to Setup Wizard*** pop out, Click ***Next*** to continue.



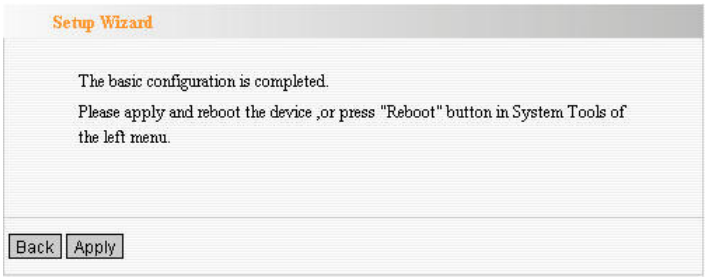
2. Select one Internet connection type you're using. If you're not sure, click ***Detect*** or contact your Internet Service Provider.


Setup Wizard
There are six Internet connection modes to choose from: Static IP, Dynamic IP, PPPOE, L2TP, PPTP and 802.1x. If you are unsure of your connection method, please contact your Internet Service Provider.
Enable auto detect,please click
Auto Detect
ADSL Virtual Dial-up (via PPPoE)
Dynamic IP (via DHCP)
Static IP
L2TP
PPTP
Next

a. ADSL Virtual Dial-up (Via PPPoE)
Enter the Account and Password provided by your ISP.

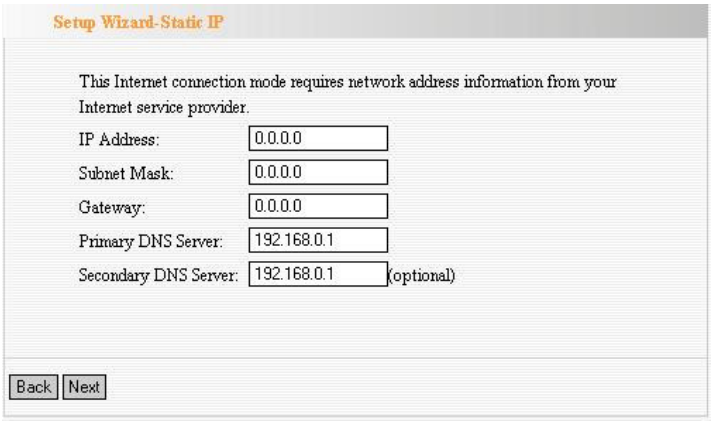


b. Dynamic IP (Via DHCP)
If your connection type is Dynamic IP, it means your IP address keeps changing every time you connect. You do not need to enter the information.


Setup Wizard
The basic configuration is completed.
Please apply and reboot the device ,or press "Reboot" button in System Tools of the left menu.
Back
Apply

c. Static IP

Fill the network address information from your ISP in the IP Address, Subnet Mask, Gateway and Primary DNS server fields.

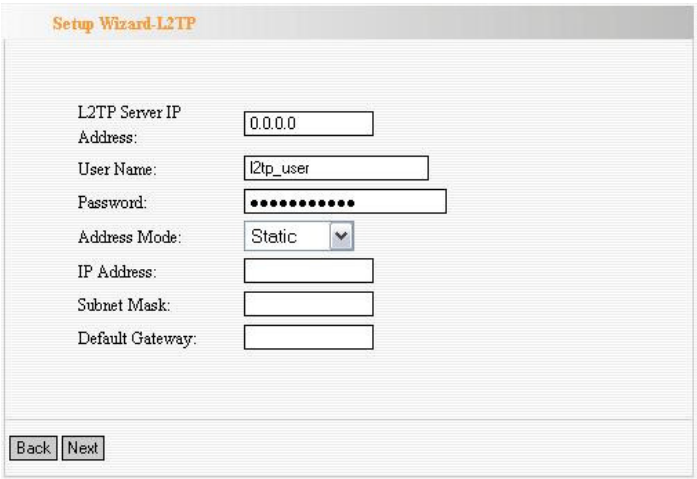


d. L2TP

Enter the Account and Password provided by your ISP.

L2TP(Layer 2 Tunneling Protocol) **provides two address modes.**

- **Dynamic IP:** If the L2TP offered by your ISP is Dynamic IP, please select Dynamic IP.
- **Static IP:** Please fill in the parameters provided by your ISP.

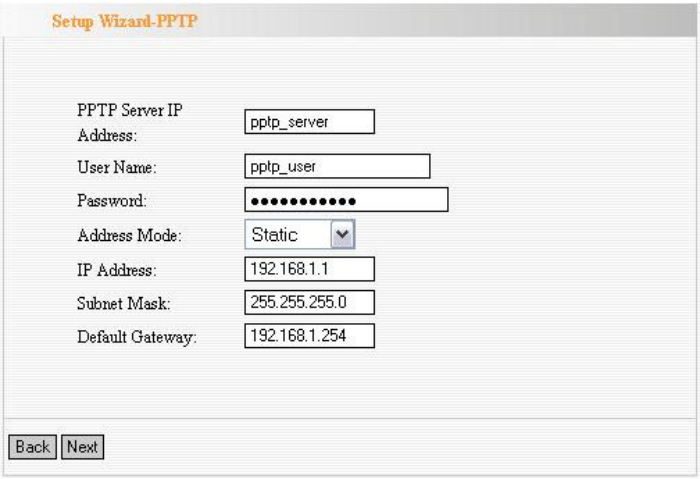


e. PPTP

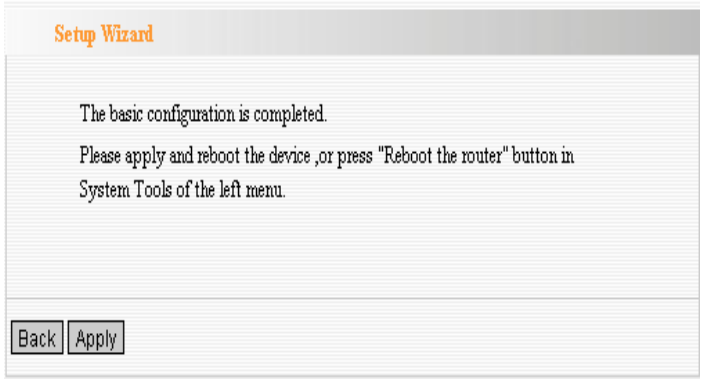
Enter the Server IP Address, User Name, and Password provided by your ISP

PPTP(PP Tunneling Protocol) **provides two address modes.**

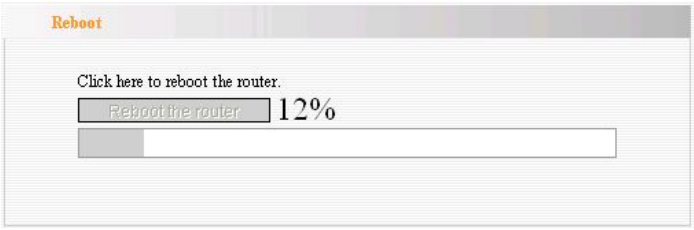
- **Dynamic IP:** If the PPTP offered by your ISP is Dynamic IP, please select Dynamic IP.
- **Static IP:** Please fill in the parameters provided by your ISP.



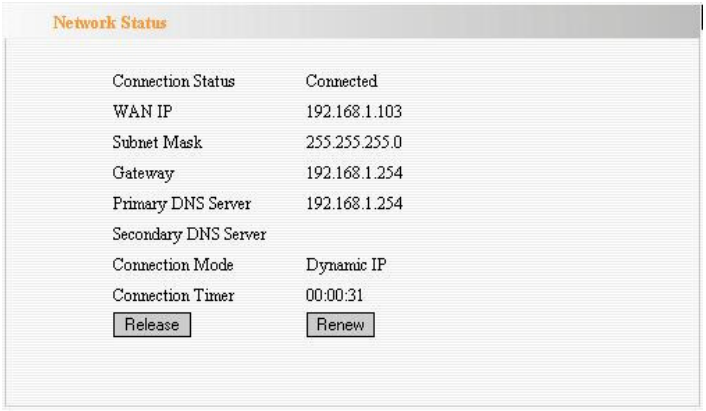
3. Click ***Apply*** and reboot ZSR4154WS, or select ***Reboot*** in ***System Tools*** of the left menu and click ***Reboot the router*** button.


Setup Wizard
The basic configuration is completed.
Please apply and reboot the device ,or press "Reboot the router" button in System Tools of the left menu.
Back
Apply

4. While rebooting, please wait for few minutes and **DO NOT** power off.

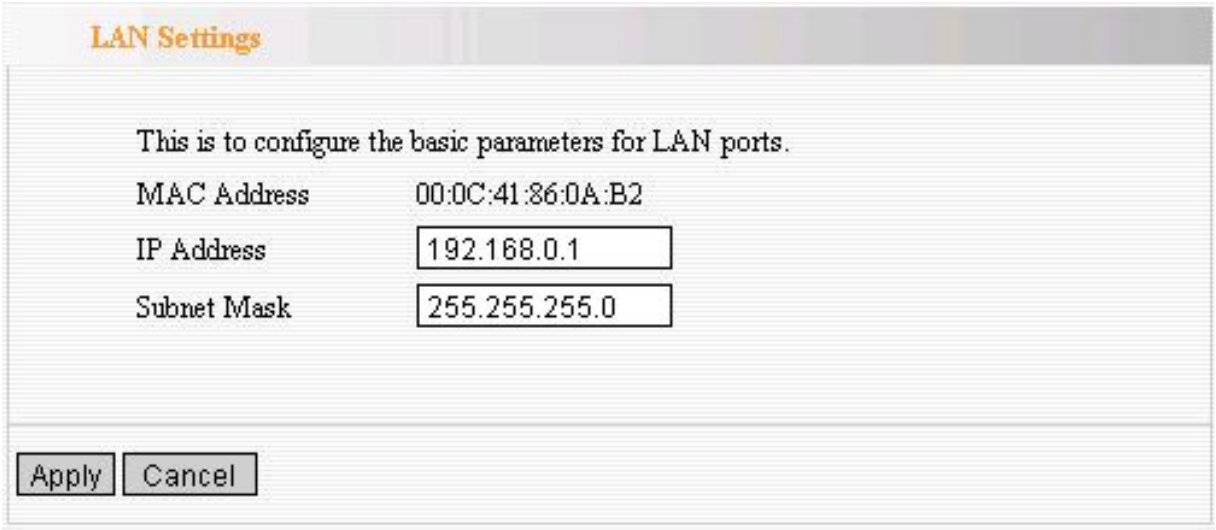


5. Select ***System Status*** from the left menu to find out the current network and system information.



Chapter 5 Advanced Settings

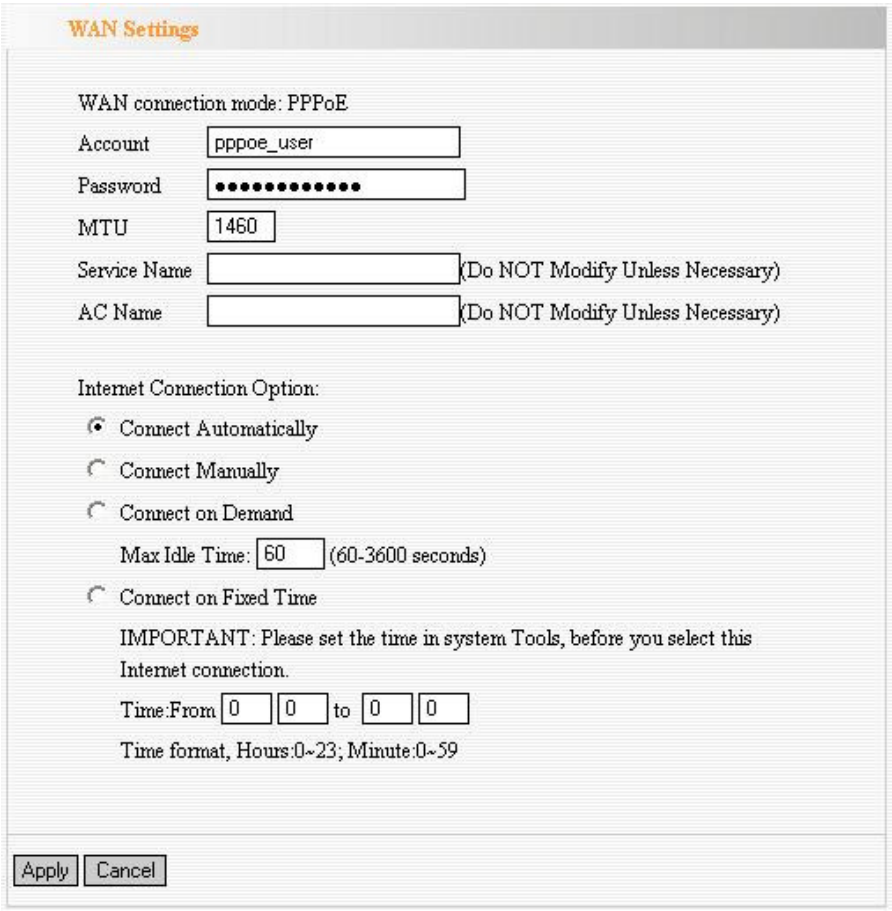
LAN Settings



- **MAC Address:** ZSR4154WS's physical MAC address on your local network is unchangeable.
- **IP Address:** ZSR4154WS's LAN IP address (not your PC's IP address). Once you modify the IP address, you need to remember it for the Web-based Utility login next time. Default value is 192.168.0.1
- **Subnet Mask:** ZSR4154WS's subnet mask for measurement of the network size. Default value is 255.255.255.0.

WAN Settings

a. PPPoE

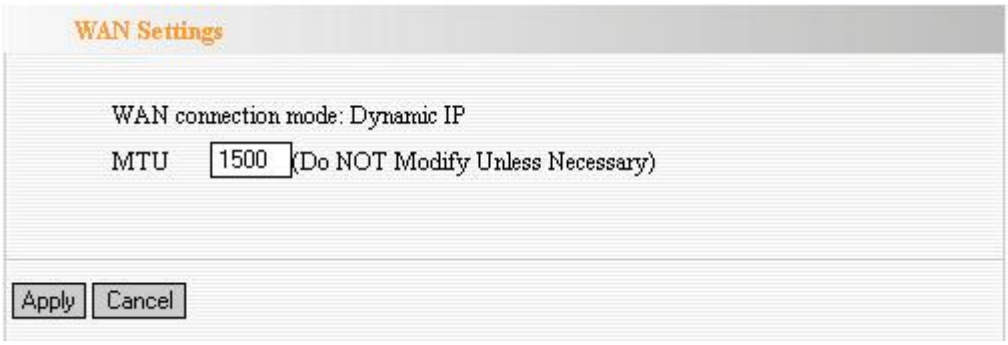


- **Connection Mode:** Show your current connection mode.
- **Account:** Provided by your ISP.
- **Password:** Provided by your ISP.
- **MTU:** Maximum Transmission Unit. It is the size of largest datagram that can be sent over a network. The default value is 1492. Do NOT modify it unless necessary.
- **Service Name:** It is defined as a set of characteristics that are applied to a PPPoE connection. Enter it if provided. Do NOT modify it unless necessary.
- **AC Name:** Enter it if provided. Do NOT modify it unless necessary.

Internet Connection Option:

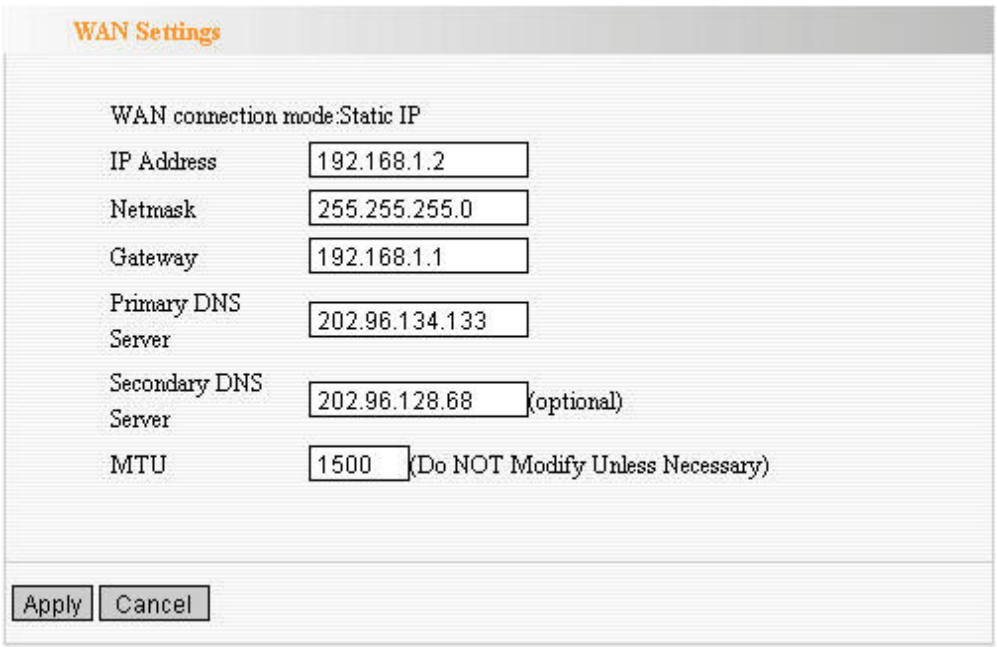
- **Connect Automatically:** Connect automatically to the Internet after rebooting system or connection failure.
- **Connect Manually:** Connect to the Internet by the user manually.
- **Connect on Demand:** Re-establish your connection to the Internet after the specific time (Max Idle Time). Zero means your Internet connection at all time. Otherwise, enter the minutes to be elapsed before you want to disconnect the Internet access.
- **Connect on Fixed Time:** Connect to the Internet during the time you fix.

b. Dynamic IP



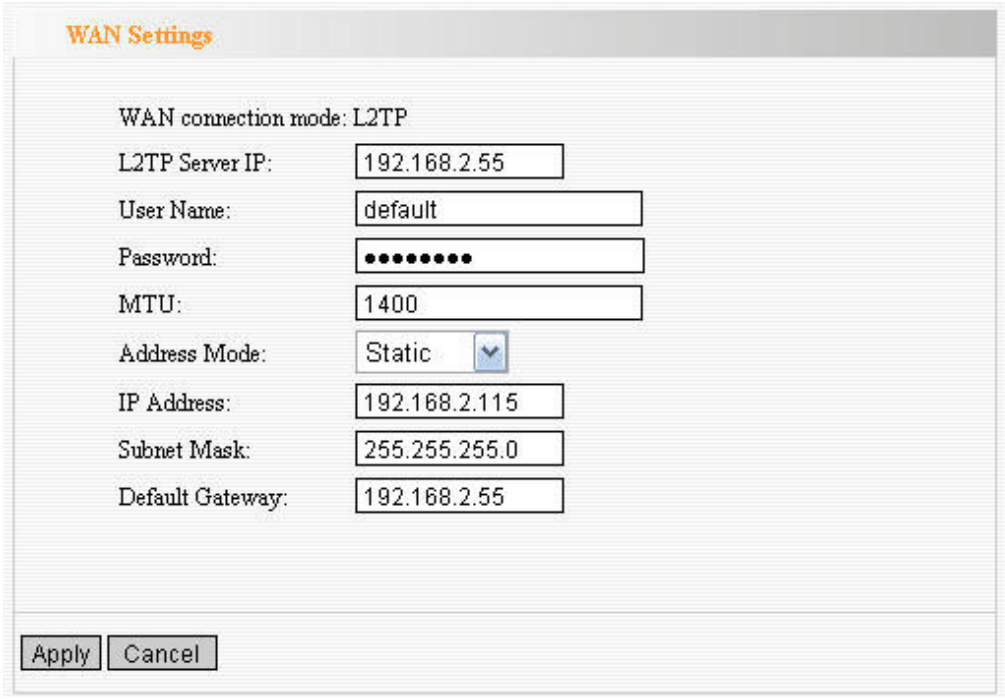
- **MTU:** Maximum Transmission Unit. It is the size of largest datagram that can be sent over a network. The default value is 1500. Do NOT modify it unless necessary.

c. Static IP



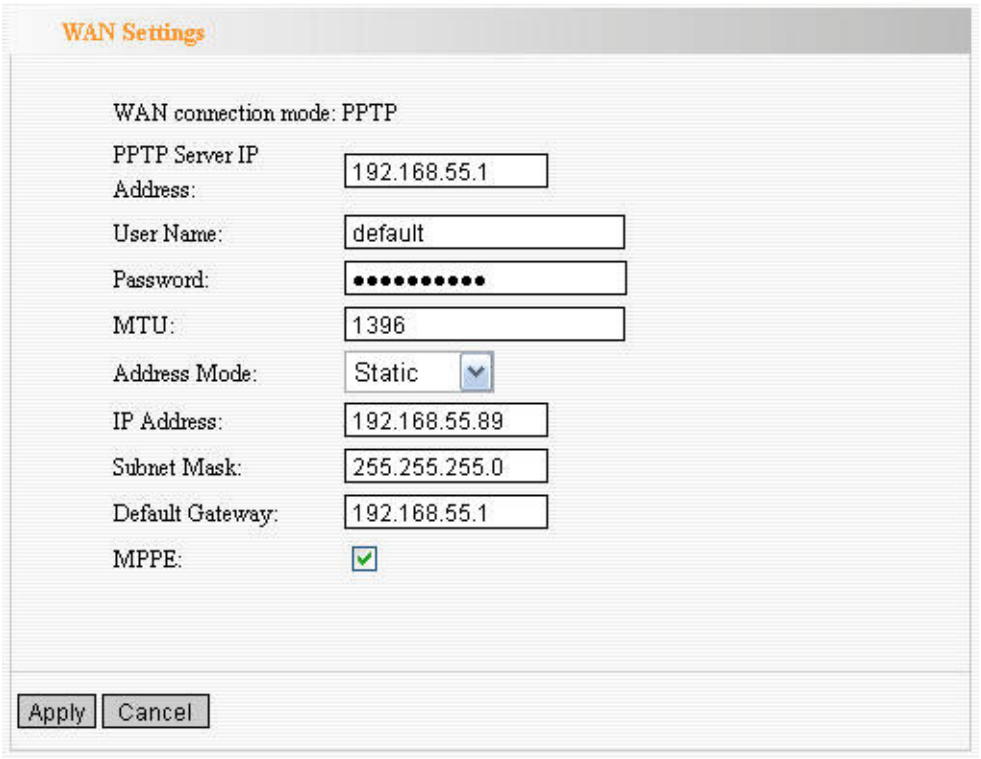
- **IP Address:** Enter the WAN IP address provided by your ISP.
- **Subnet Mask:** Enter the WAN Subnet Mask.
- **Gateway:** Enter the WAN Gateway.
- **Primary DNS Server:** Enter the Primary DNS server provided by your ISP.
- **Secondary DNS Server:** Enter the second address if your ISP provides, which is optional.
- **MTU:** Maximum Transmission Unit, you may need to change it for optimal performance with your specific ISP.

d. L2TP



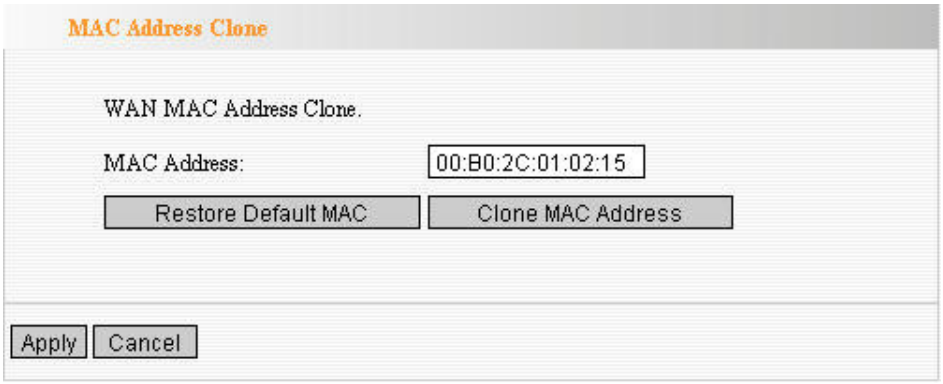
- **L2TP Server IP:** Enter the Server IP provided by your ISP.
- **User Name:** Enter L2TP username.
- **Password:** Enter L2TP password.
- **MTU:** Maximum Transmission Unit, you may need to change it for optimal performance with your specific ISP. 1400 is the default MTU.
- **Address Mode:** Select ***Static*** if your ISP supplies you with the IP address, subnet mask, and gateway. In most cases, select ***Dynamic***.
- **IP Address:** Enter the L2TP IP address supplied by your ISP.
- **Subnet Mask:** Enter the Subnet Mask supplied by your ISP.
- **Default Gateway:** Enter the Default Gateway supplied by your ISP.

e. PPTP



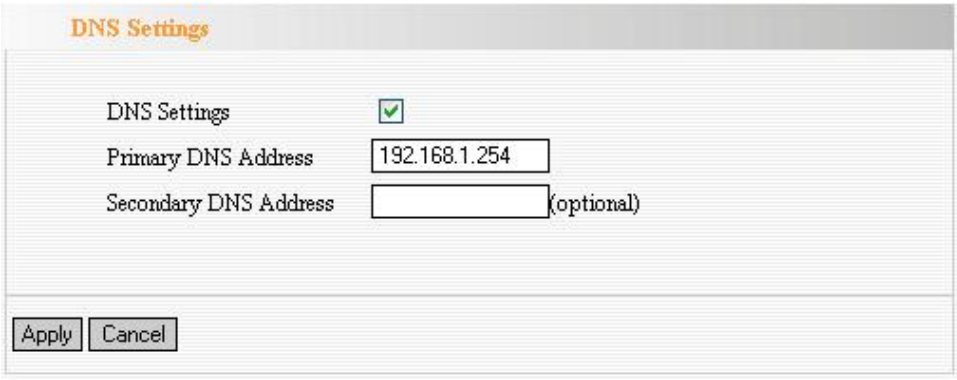
- **PPTP Server IP:** Enter the Server IP provided by your ISP.
- **User Name:** Enter PPTP username provided by your ISP.
- **Password:** Enter PPTP password provided by your ISP.
- **Address Mode:** Select ***Static*** if your ISP supplies you with the IP address, subnet mask, and gateway. In most cases, select ***Dynamic***.
- **IP Address:** Enter the PPTP IP address supplied by your ISP.
- **Subnet Mask:** Enter the Subnet Mask supplied by your ISP.
- **Default Gateway:** Enter the Default Gateway supplied by your ISP.

MAC Address Clone



- **MAC Address:** The MAC address registered with your Internet service provider.
- **Clone MAC address:** Register your PC's MAC address.
- **Restore default MAC address:** Restore the default hardware MAC address.

DNS Settings



- **DNS:** Choose the checkbox to enable the DNS server.
- **Primary DNS Address:** Enter the necessary address provided by your ISP.
- **Secondary DNS Address:** Enter the second address if your ISP provides, which is optional.

Chapter 6 Wireless Settings

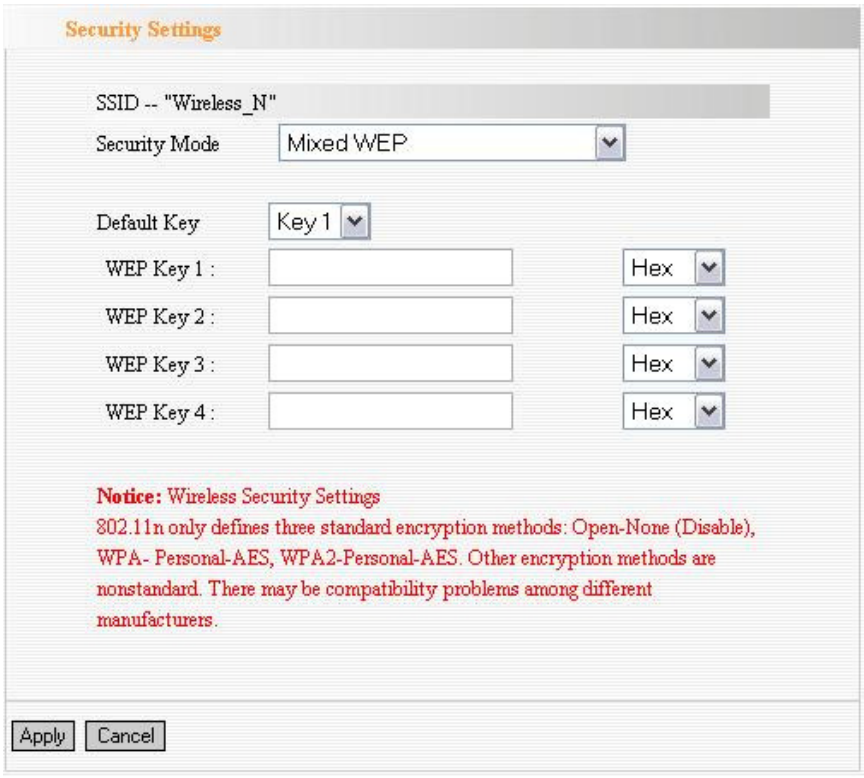
Basic Settings

- **Network Mode:** Supports 802.11b/g mixed, 802.11b, 802.11g and 802.11b/g/n mixed modes.
- **SSID:** Service Set Identifier. It's the name of your wireless network.
- **Broadcast (SSID):** Decide if ZSR4154WS will broadcast its own ESSID or not.
- **BSSID:** It is a 48bit identity used to identify a particular BSS (Basic Service Set) within an area. In Infrastructure BSS networks, the BSSID is the MAC address of the AP
- **Channel:** Select the channel used for wireless communication from drop-down list. Available channel numbers are 1 to 13 for European countries, 1 to 11 for USA.
- **Channel Bandwidth:** Select wireless work frequency 20M or 20/40M.

Security Settings

a. Mixed WEP

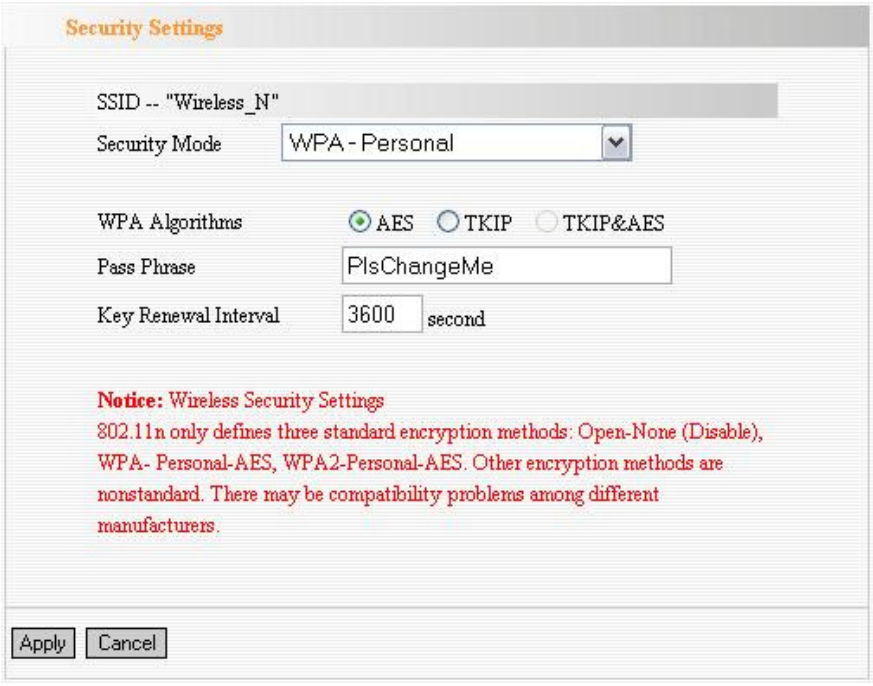
WEP (Wired Equivalent Privacy) is an encryption method used to protect your wireless data communications. WEP uses a combination of 64-bit or 128-bit keys to provide access control to your network and encryption security for every data transmission.



- **Default Key:** You can set up to four sets of WEP key, and you can decide which key is being used by default here.
- **WEP Key1, 2, 3, 4:** Input WEP key characters here, the number of characters must be the same as the number displayed at "Key Format" field. You can use any alphanumerical characters (0-9, a-z, and A-Z) if you select "ASCII" key format, and if you select "Hex" as key format, you can use characters 0-9, a-f, and A-F. You must enter at least one encryption key here, and if you entered multiple WEP keys, they should not be same with each other.

b. WPA-Personal

Wi-Fi Protected Access (WPA) is an advanced security standard. It uses TKIP and AES to change the encryption key frequently.

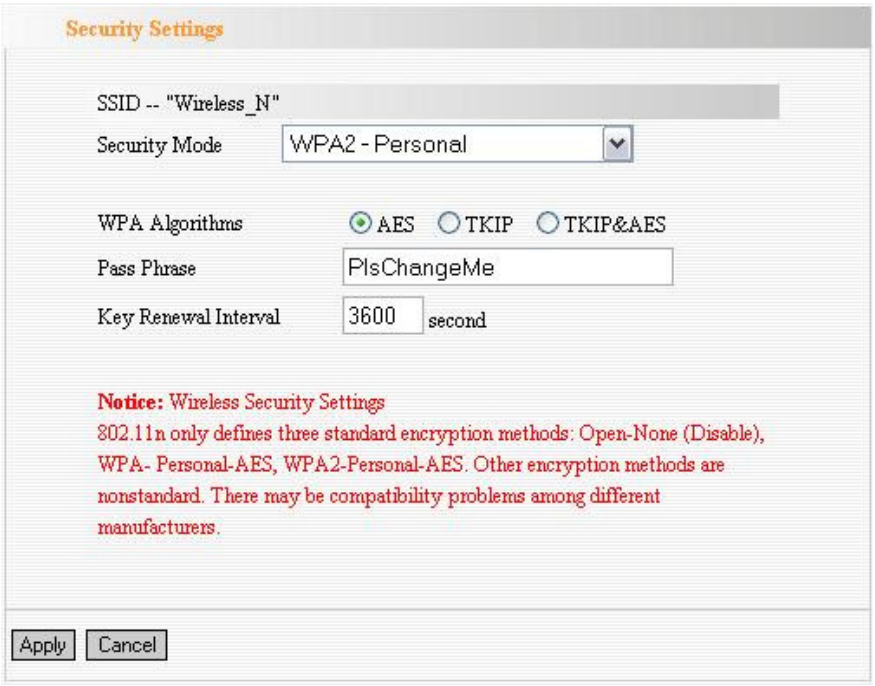


- **WPA Algorithms:** Select one encryption type, AES, TKIP or TKIP&AES.
- **Pass Phrase:** Enter the key which must have 8-63 ASCII characters.
- **Key Renewal Interval:** Specifies the timer the WPA key must changes.

The change is done automatically between the server and the client.

c. WPA2-Personal

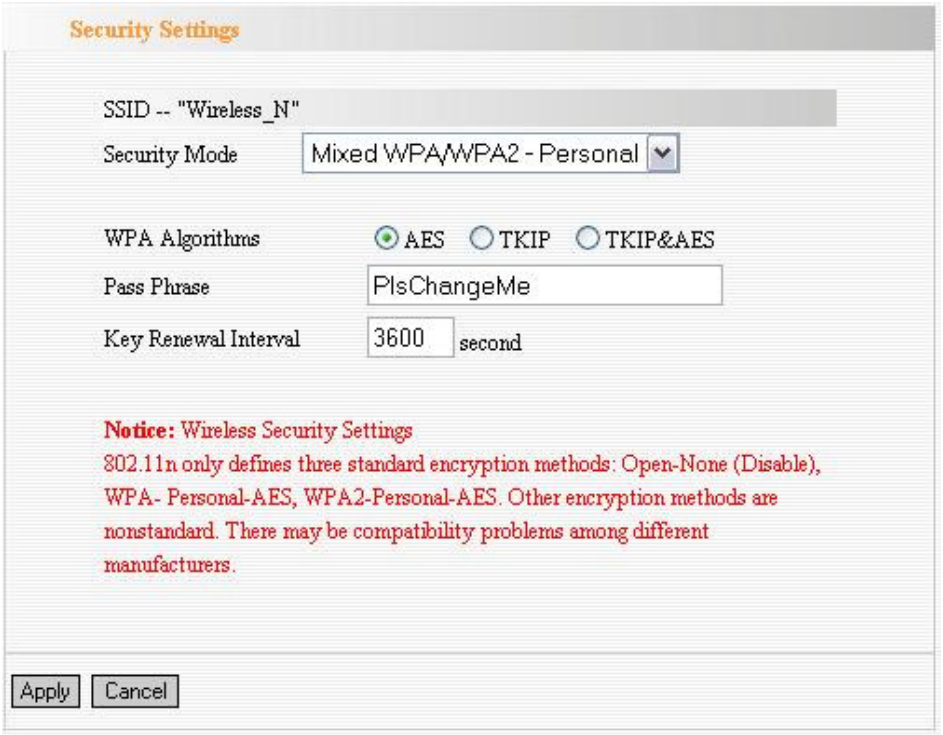
The WPA2 is a stronger version of WPA.



- **WPA Algorithms:** Select one encryption type, AES, TKIP or TKIP&AES.
- **Pass Phrase:** Enter the key which must have 8-63 ASCII characters.
- **Key Renewal Interval:** Specifies the timer the WPA key must changes.

The change is done automatically between the server and the client.

d. Mixed WPA/WPA2-Personal



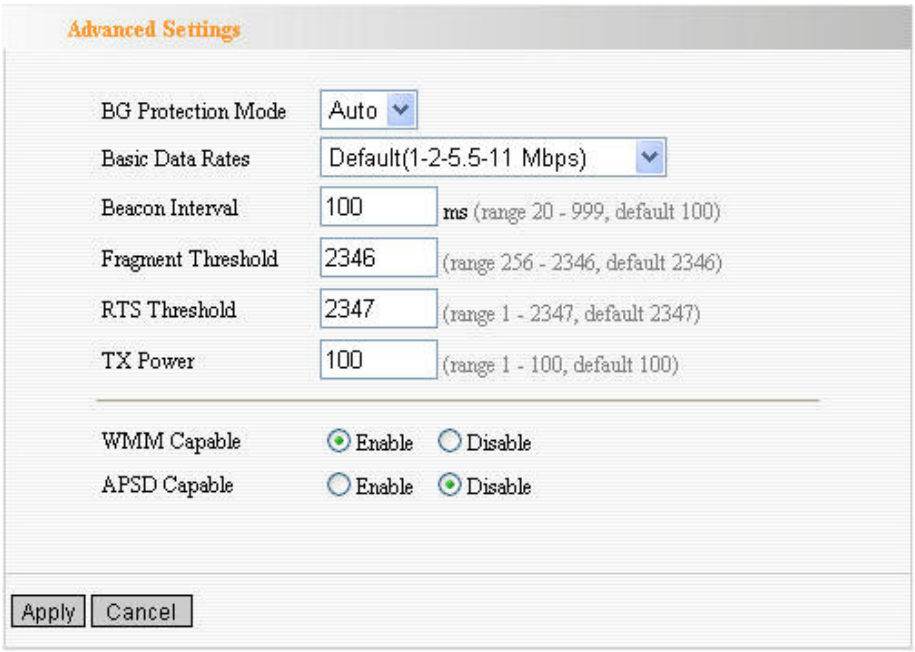
- **WPA Algorithms:** Select one encryption type, AES, TKIP or TKIP&AES.
- **Pass Phrase:** Enter the key which must have 8-63 ASCII characters.
- **Key Renewal Interval:** Specifies the timer the WPA key must changes.

The change is done automatically between the server and the client.

NOTE: *To improve security level, do not use those words which can be found in a dictionary or too easy to remember! Wireless clients will remember the WEP key, so you only have to input the WEP key on wireless client once, and it's worth to use complicated WEP key to improve security level.*

Advanced Settings

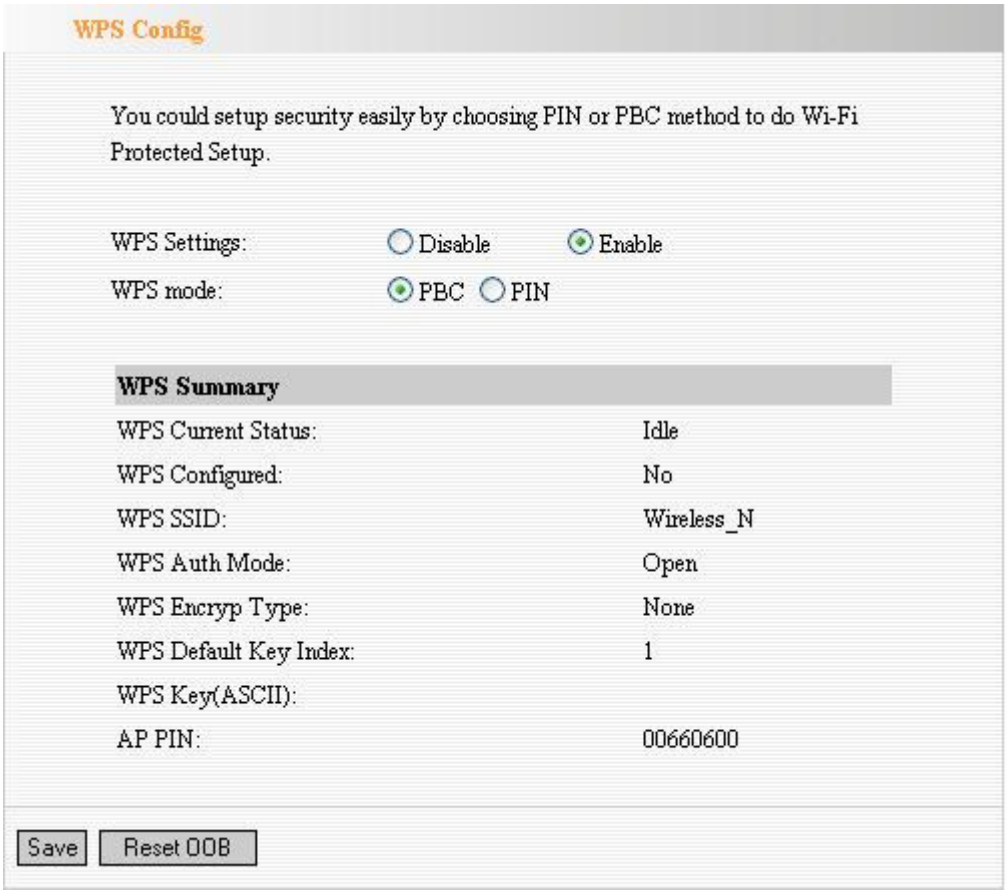
ZSR4154WS provides some advanced control of wireless parameters, if you want to configure these settings, please click "Wireless" menu on the left of web management interface, then click "Advanced Settings", and the following message will be displayed on your web browser:



- **BG Protection Mode:** Default mode is Auto. It is for 11b/g wireless client to connect 11n wireless network smoothly in a complicated wireless area.
- **Basic Data Rates:** For different requirement, you can select one of the suitable Basic Data Rates. Default value is (1-2-5.5.-11Mbps…). It is recommended not to modify this value.
- **Beacon Interval:** Set the beacon interval of wireless radio. Default value is 100. It is recommended not to modify this value.
- **Fragment Threshold:** The fragmentation threshold defines the maximum transmission packet size in bytes. The packet will be fragmented if the arrival is bigger than the threshold setting. The default size is 2346 bytes. It is recommended not to modify this value.
- **RTS Threshold:** RTS stands for "Request to Send". This parameter controls what size data packet the frequency protocol issues to RTS packet. The default value of the attribute is 2346. It is recommended not to modify this value in SOHO environment.
- **TX Power:** Set the output power of wireless radio. The default value is 100.
- **WMM Capable:** It will enhance the data transfer performance of multimedia data when they're being transferred over wireless network. It is recommended to enable this option.
- **APSD Capable:** It is used for auto power-saved service. The default is disabled.

WPS Settings

Wi-Fi Protected Setup (WPS) is the simplest way to build connection between wireless network clients and ZSR4154WS. You don't have to select encryption mode and input a long encryption passphrase every time when you need to setup a wireless client, you only have to press a button on wireless client and this wireless router, and the WPS will do the rest for you.



- **WPS Settings:** To enable or disable WPS function, default setting is Diable.
- **WPS Mode:** Supports two ways to configure WPS settings:
  PBC) and PIN code.
  - **PBC**(Push-Button Configuration)**:** If you want to use PBC, you have to push a specific button on the wireless client to start WPS mode, and switch ZSR4154WS to WPS mode too. You can push WPS button of ZSR4154WS, or click ***PBC*** button in the web configuration interface to enable WPS

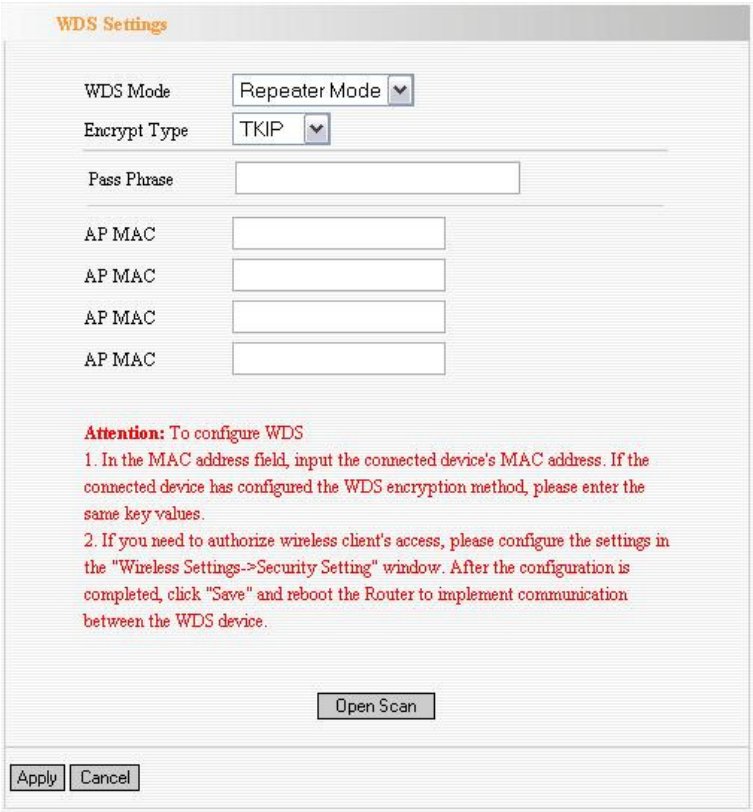
NOTE: *Press WPS button of ZSR4154WS for one second and WPS indicator will blinking for 2 minutes. During the blinking time, you can enable another Router to implement the WPS/PBC negotiation between them. At present, the WPS only support one client access. Two minutes later, the WPS indicator will be off.*

- **PIN:** if you want to use PIN code, you have to know the PIN code of wireless client and switch it to WPS mode, then provide the PIN code of the wireless client you wish to connect to ZSR4154WS.

- **WPS Current Status：** Idle means WPS in idle state. Start MSC process means the process has been started and waits for being connected. Configured means the negotiation is successful between server and clients.
- **WPS Configured：** *Yes* means WPS feature is enabled and goes into effect. *No* means it is not used. Usually the AP-security has been enabled will displayed *No*.
- **WPS SSID：** Show the main SSID set by WPS.
- **WPS Auth. Mode：** The authorization mode deployed by WPS, generally WPA/WPA2-personal mode.
- **WPS Encrypt Type：** The encryption type used by WPS, generally AES/TKIP.
- **WPS key：** The effective key generated by AP automatically.
- **AP PIN（KEY）：** The PIN code used by default.
- **Reset OOB：** When the button is pressed, the WPS client will be idle state, and WPS indicator will be turned off. ZSR4154WS will not respond the WPS client's requests and the set the security mode as WPA mode.

WDS Settings

In this mode, you can expand the scope of network by combining up to four other access points together, and every access point can still accept wireless clients.

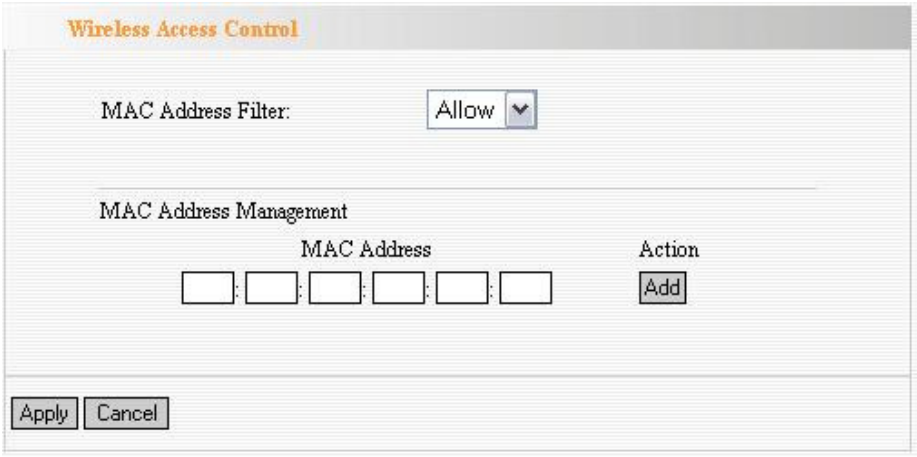

WDS Settings
WDS Mode
Repeater Mode
Encrypt Type
TKIP
Pass Phrase
AP MAC
AP MAC
AP MAC
AP MAC
Attention: To configure WDS
1. In the MAC address field, input the connected device's MAC address. If the connected device has configured the WDS encryption method, please enter the same key values.
2. If you need to authorize wireless client's access, please configure the settings in the "Wireless Settings->Security Setting" window. After the configuration is completed, click "Save" and reboot the Router to implement communication between the WDS device.
Open Scan
Apply
Cancel

- **WDS Mode:**
  - **Lazy Mode:** You need to configure ZSR4154WS’s BSSID into another device, but don’t need to input another device’s BSSID in ZSR4154WS, and they will connect together automatically.
  - **Bridge Mode:** You can wirelessly connect two or more wired networks via this mode. In this mode, you need to add the Wireless MAC address of the connecting device into ZSR4154WS's AP MAC address table or select one from the scanning table. At the same time, the connecting device should be in Lazy, Repeater or Bridge mode.
  - **Repeater Mode:** You can select the mode to extend the distance between the two WLAN devices. Functioning as a WDS repeater, ZSR4154WS connects to both a client card as an AP and to another AP. In typical repeater applications, APs connecting to other APs equipped with WDS functionality must also support WDS. In this mode, you need to add the MAC address of the connecting device into ZSR4154WS's AP MAC address table and the connecting client should be in Lazy, Repeater or client mode.
- **Encrypt Type:** You can select from ***NONE***, ***WEP***, ***TKIP***, and ***AES*** for security here.
- **Pass phrase:** Enter the key, the key format according to encryption you selected.
- **AP MAC:** Input the MAC address of another wireless router.

NOTE**:** *Two wireless routers must use the same band, channel number, and security setting.*

Access Control

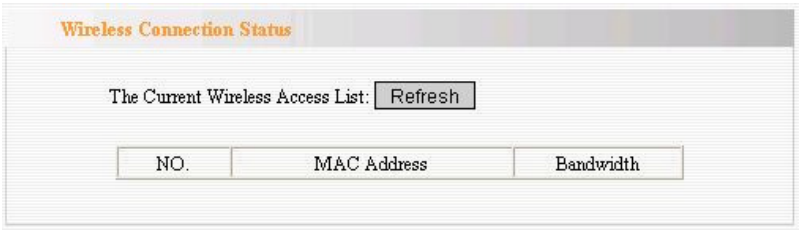
This function will help you to prevent unauthorized users from connecting to ZSR4154WS; only those wireless devices who have the MAC address you assigned here can gain access to your ZSR4154WS. You can use this function with other security measures described in previous section, to create a safer wireless environment.



- **MAC Address Filter:** If you want to access ZSR4154WS from any external IP Address, please select ***Disable***.
- **MAC Address:** To specify an external IP address, please add the MAC address manually and click ***Add***.
- **MAC Address List:** The added MAC addresses are listed here. Click ***Delete*** to delete the filter management for this MAC address.

Connection Status

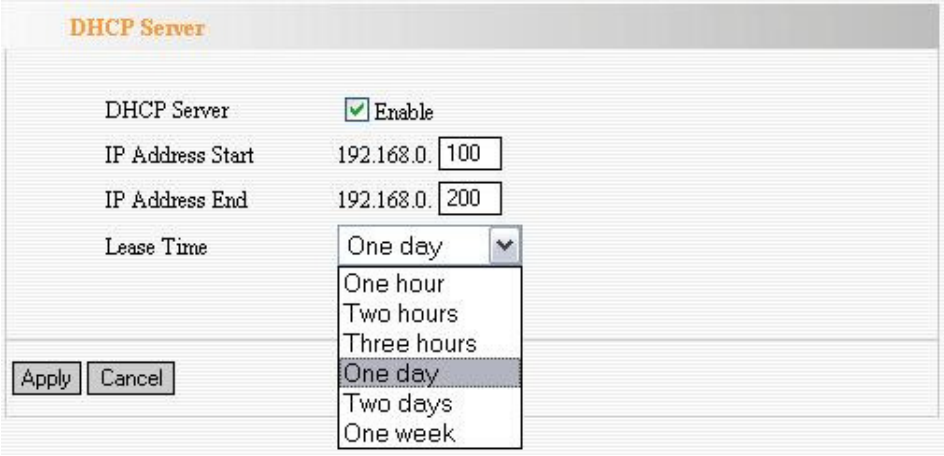
Click ***Refresh*** to update the wireless connection information.



- **MAC Address:** Shows the connecting PC's MAC address.
- **Bandwidth:** displays the channel bandwidth of the host to be connected.

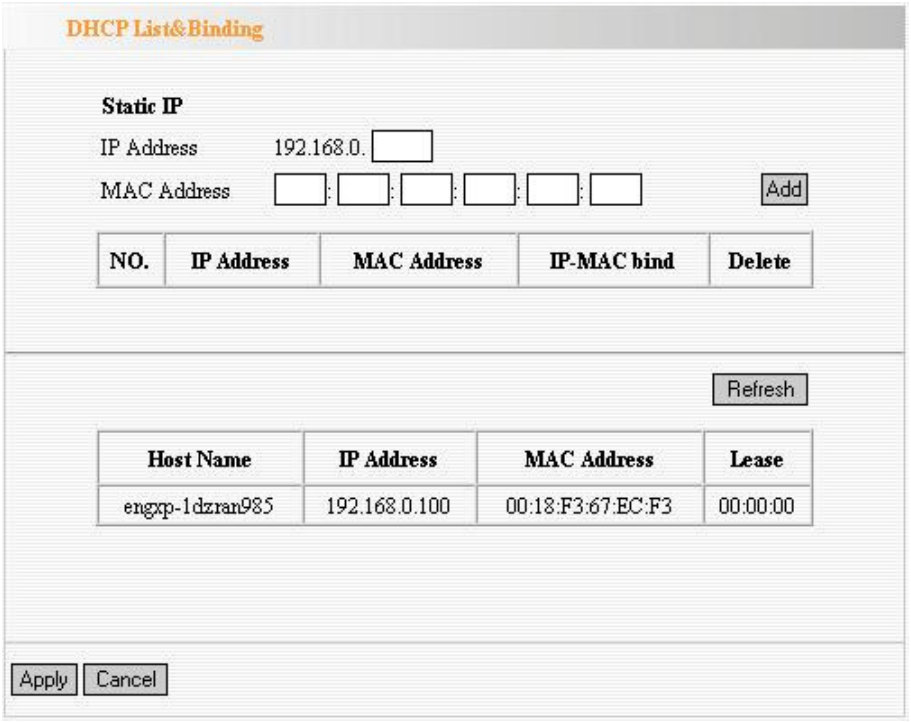
Chapter 7 DHCP Server

These settings are only available when ***DHCP Server*** in ***LAN IP*** section is **Enable**.



- **DHCP Server:** Activate the checkbox to enable DHCP server.
- **IP Address Start/End:** Enter the range of IP address for DHCP server distribution.
- **Lease Time:** choose a lease time (the duration that every computer can keep a specific IP address) of every IP address assigned by ZSR4154WS from dropdown menu.

DHCP List & Binding

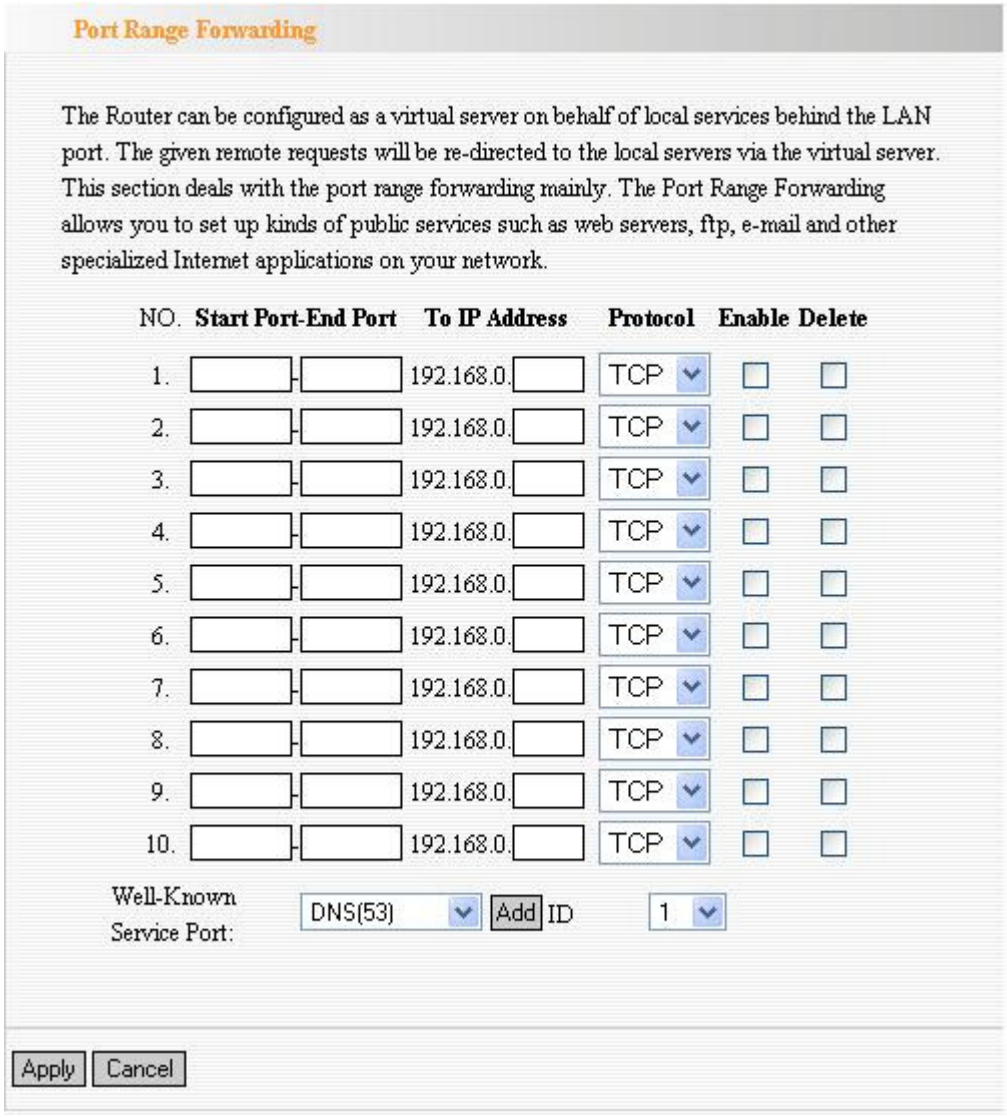


- **IP Address:** Input the IP address for the computer on the LAN network.
- **MAC Address:** Enter the MAC address of the computer you want to assign. And then click ***Add*** to add to the list.
- **Hostname:** The name of the computer.
- **Lease Time:** The time length of the corresponding IP address lease.

Chapter 8 Virtual Server

Port Range Forwarding

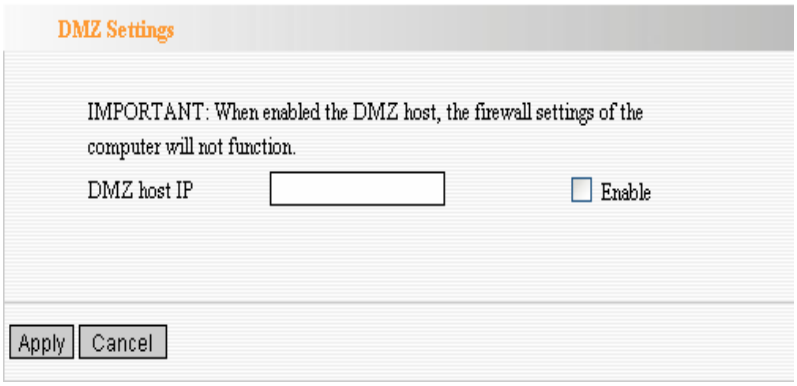
This section deals with the port range forwarding mainly. The Port Range Forwarding allows you to set up a range of public services such as web servers, ftp, e-mail and other specialized Internet applications to an assigned IP address on your LAN.


Port Range Forwarding
The Router can be configured as a virtual server on behalf of local services behind the LAN port. The given remote requests will be re-directed to the local servers via the virtual server. This section deals with the port range forwarding mainly. The Port Range Forwarding allows you to set up kinds of public services such as web servers, ftp, e-mail and other specialized Internet applications on your network.
NO. Start Port-End Port To IP Address Protocol Enable Delete
1. 192.168.0. TCP
2. 192.168.0. TCP
3. 192.168.0. TCP
4. 192.168.0. TCP
5. 192.168.0. TCP
6. 192.168.0. TCP
7. 192.168.0. TCP
8. 192.168.0. TCP
9. 192.168.0. TCP
10. 192.168.0. TCP
Well-Known Service Port:
DNS(53)
Add
ID
1
Apply
Cancel

- **Start/End Port:** Enter the start/end port number which ranges the External ports used to set the server or Internet applications.
- **IP Address:** Enter the IP address of the PC where you want to set the applications.
- **Protocol:** Select the protocol (TCP/UDP/Both) for the application.
- **Well-Known Service Port:** Select the well-known services as DNS, FTP from the drop-down menu to add to the configured one above.
- **Delete/Enable:**Click to check it for corresponding operation.

DMZ Settings

The DMZ(Demilitarized Zone) function is to allow one computer in LAN to be exposed to the Internet for a special-purpose service as Internet gaming or videoconferencing.

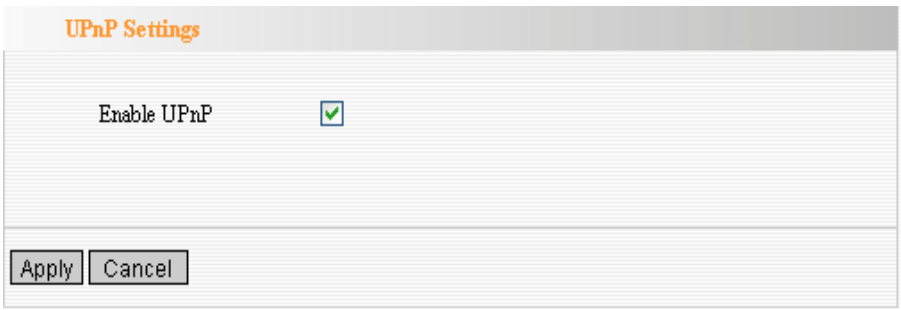


- **DMZ Host IP Address:** The IP address of the computer you want to expose.
- **Enable:** Select the checkbox to enable the DMZ host.

IMPORTANT: *When enabled the DMZ host, the firewall settings of the DMZ host will not function.*

UPnP Settings

Universal Plug and Play function enables network auto-configuration for peer-to-peer communications. With this function, network devices will be able to communicate with other devices directly, and learn about information about other devices. Many network device and applications rely on UPnP function nowadays.



- **Enable UPnP:** Select the checkbox to enable the UPnP.

Chapter 9 Traffic Control

Traffic control is used to limit communication speed in the LAN and WAN. Up to 20 entries can be supported with the capability for at most 254 PCs' speed control, including for IP address range configuration.

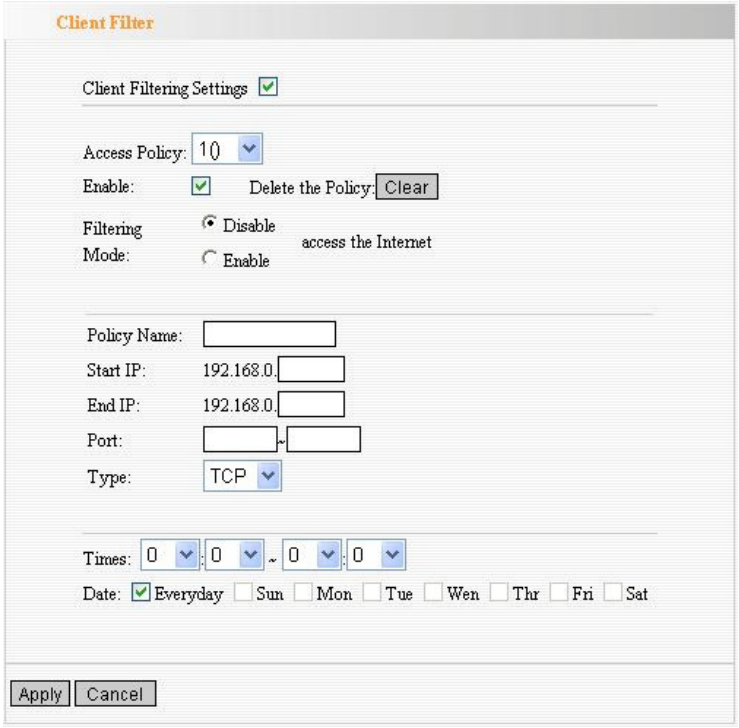
- **Traffic Control:** Select the checkbox to enable the internal IP bandwidth control.
- **Interface:** To limit the uploading and downloading bandwidth in WAN port.
- **Service:** To select the controlled service type, such as HTTP service.
- **IP Starting Address:** The first IP address for traffic control.
- **IP Ending Address:** The last IP address for traffic control.
- **Uploading/Downloading:** To specify the traffic heading way for the selected IP addresses: uploading or downloading.
- **Bandwidth:** To specify the uploading/downloading Min. /Max. Traffic speed (KB/s), which can not exceed the WAN speed.
- **Apply:** Select the checkbox to enable the current editing rule.
- **Add:** After edit the rule, click the ***Add*** button to add the current rule to rule list.

NOTE: *It is allowed to delete or modify the previous rules in the list table.*

Chapter 10 Security Settings

Client Filter

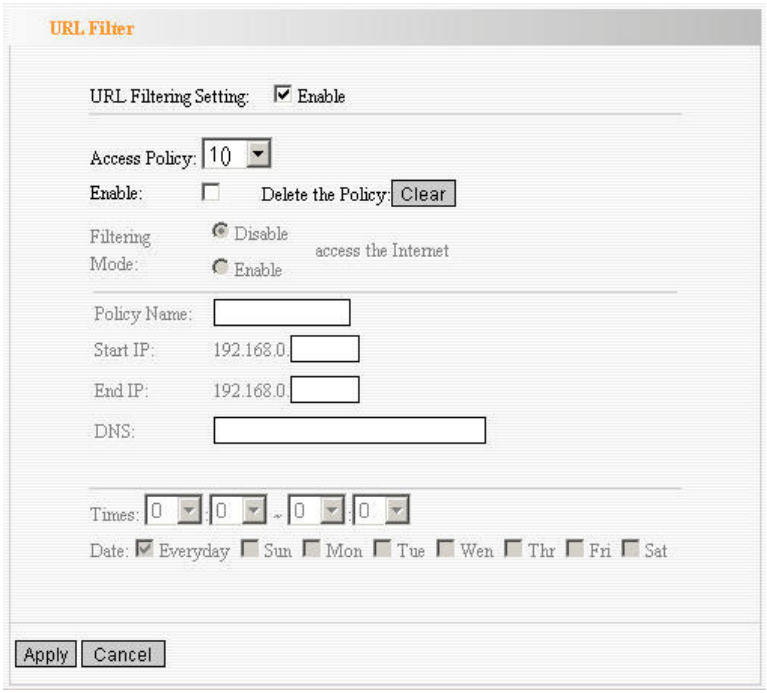
To benefit your further management to the computers in the LAN, you can control some ports access to Internet by data packet filter function.



- **Client Filtering Settings:** Select the checkbox to enable client filter.
- **Access Policy:** Select one number from the drop-down menu.
- **Enable:** Select the checkbox to enable the access policy.
- **Delete the Policy:** Click ***Clear*** button to clear all settings for the policy.
- **Filtering Mode:** Select one button to enable or disable to access the Internet.
- **Policy Name:** Enter a name for the access policy selected.
- **Start/End IP:** Enter the starting/ending IP address.
- **Port:** Enter the port range over the protocol for access policy.
- **Type:** Select one protocol (TCP/UDP/Both) from drop-down menu.
- **Times:** Select the time range of client filter.
- **Days:** Select the day(s) to run the access policy.

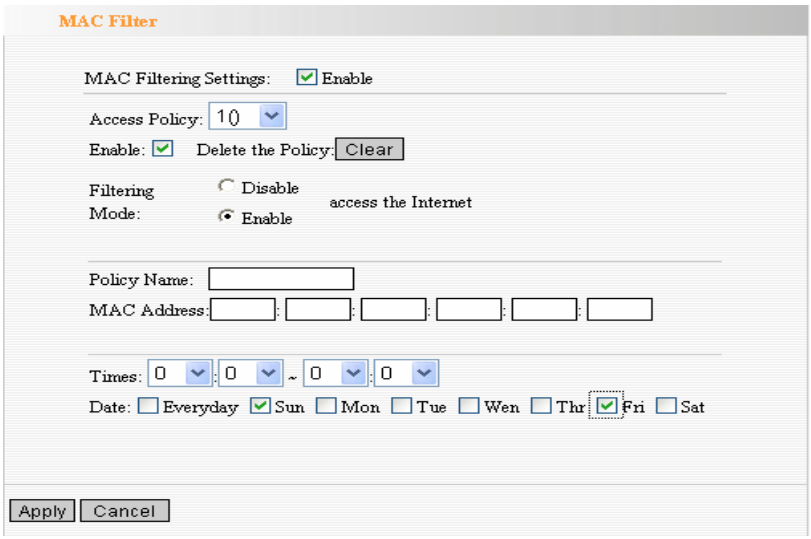
URL Filter

If you want to prevent computers in local network from accessing certain website (like pornography, violence, or anything you want to block), you can use this function to stop computers in local network from accessing the site you defined here.



- **URL Filtering Setting:** Select the checkbox to enable URL filter.
- **Access Policy:** Select one number from the drop-down menu.
- **Enable:** Select the checkbox to enable the access policy.
- **Delete the Policy:** Click ***Clear*** button to clear all settings for the policy.
- **Filtering Mode:** Select one button to enable or disable to access the Internet.
- **Policy Name:** Enter a name for the access policy selected.
- **Start/End IP:** Enter the starting/ending IP address.
- **DNS:** Input the string or keyword which is contained in URL. If any part of the URL contains these strings or words, the web page will not be accessible and display.
- **Times:** Select the time range of client filter.
- **Days:** Select the day(s) to run the access policy.

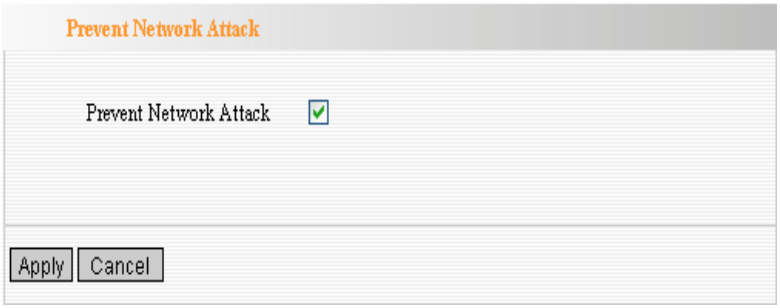
MAC Filter


MAC Filter
MAC Filtering Settings: Enable
Access Policy: 10
Enable: Delete the Policy: Clear
Filtering Mode: Disable Enable access the Internet
Policy Name:
MAC Address:
Times: 0 0 ~ 0 0
Date: Everyday Sun Mon Tue Wen Thr Fri Sat
Apply Cancel

- **MAC Filtering Settings:** Select the checkbox to enable MAC address filter.
- **Access Policy:** Select one number from the drop-down menu.
- **Enable:** Select the checkbox to enable the access policy.
- **Delete the Policy:** Click ***Clear*** button to clear all settings for the policy.
- **Filtering Mode:** Select one button to enable or disable to access the Internet.
- **Policy Name:** Enter a name for the access policy selected.
- **MAC Address:** Enter the MAC address you want to run the access policy.
- **Times:** Select the time range of client filter.
- **Days:** Select the day(s) to run the access policy.

Prevent Network Attack

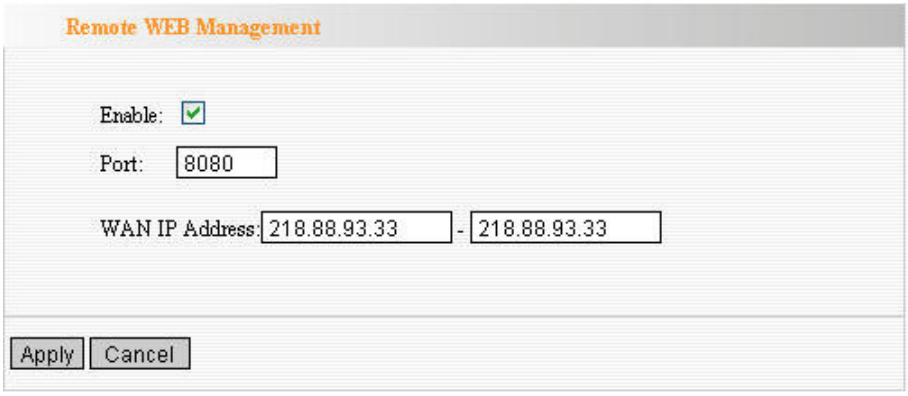
This function is to protect the internal network from exotic attack such as SYN Flooding attack, Smurf attack, LAND attack, etc. Once detecting the unknown attack, ZSR4154WS will restrict its bandwidth automatically.



- **Prevent Network Attack:** Select the checkbox to enable it.

Remote Web Management

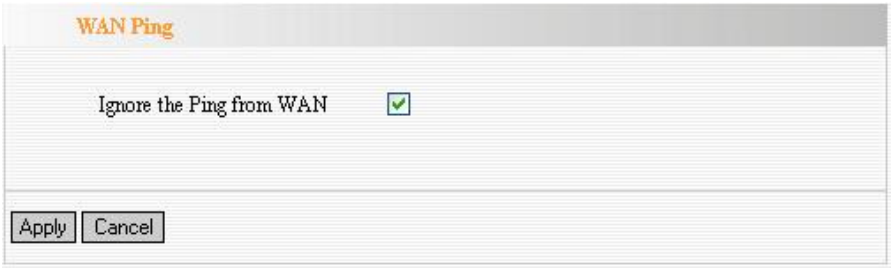
This function is to allow the network administrator to manage ZSR4154WS remotely. If you want to access ZSR4154WS from outside the local network, please select the ***Enable***.



- **Enable:** Select the checkbox to enable remote web management.
- **Port:** The management port open to outside access. Default value is 80.
- **WAN IP Address:** Specify the range of the WAN IP address for remote management.

WAN Ping

The ping test is to check the status of your internet connection. When disabling the test, the system will ignore the ping test from WAN.

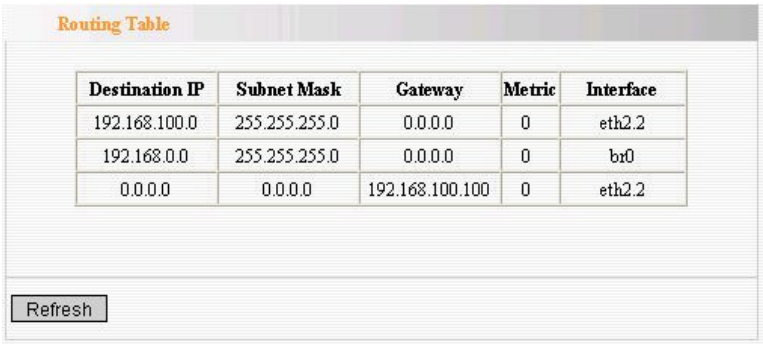


- **Ignore the Ping for WAN:** Select the checkbox to enable it.

Chapter 12 Routing Settings

Routing Table

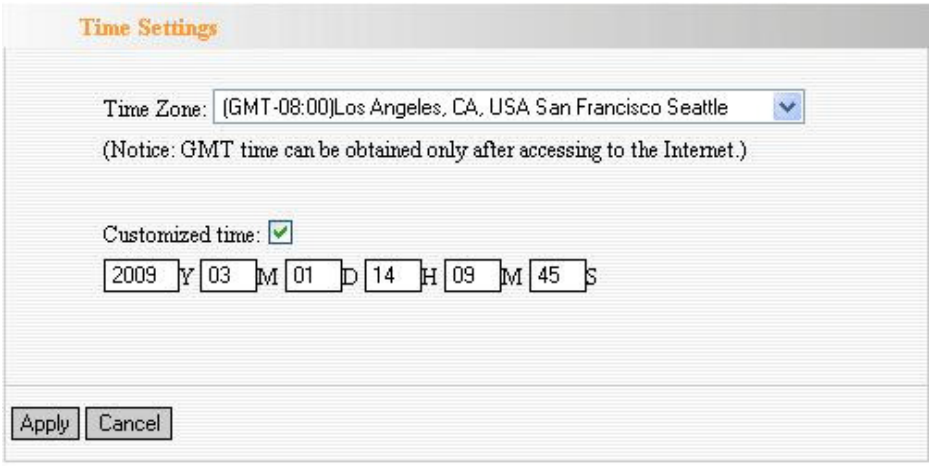
The main duty for ZSR4154WS is to look for a best path for every data frame, and transfer this data frame to destination. So, it’s essential for ZSR4154WS to choose the best path. In order to finish this function, many transferring paths are saved in ZSR4154WS for choosing when needed.



Chapter 13 System Tools

Time Settings

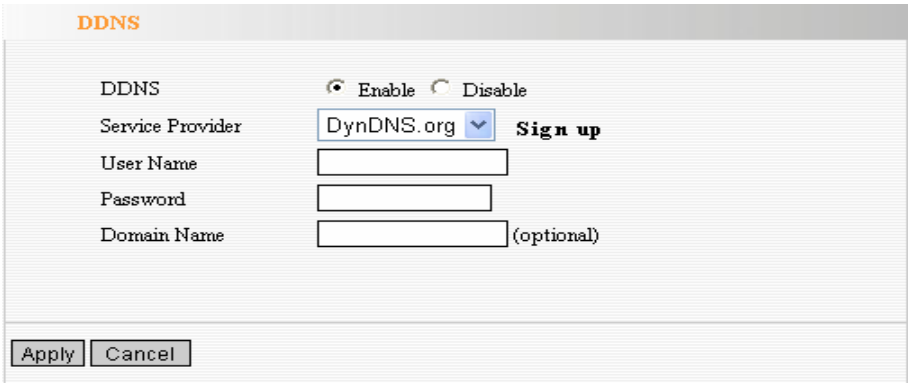
This function is to select the time zone for your location. If you turn off ZSR4154WS, the time settings will disappear. However, ZSR4154WS will automatically obtain the GMT time again once it access to the Internet.


Time Settings
Time Zone: (GMT-08:00)Los Angeles, CA, USA San Francisco Seattle
(Notice: GMT time can be obtained only after accessing to the Internet.)
Customized time:
2009 Y 03 M 01 D 14 H 09 M 45 S
Apply
Cancel

- **Time Zone:** Select your time zone from the drop-down menu.
- **Customized time:** Select the checkbox and input the time you customize.

DDNS

DDNS (Dynamic Domain Name System) is to assign a fixed host and domain name to a dynamic Internet IP address, which is used to monitor hosting website, FTP server and so on behind ZSR4154WS. If you want to activate this function, please select Enable and a DDNS service provider to sign up.

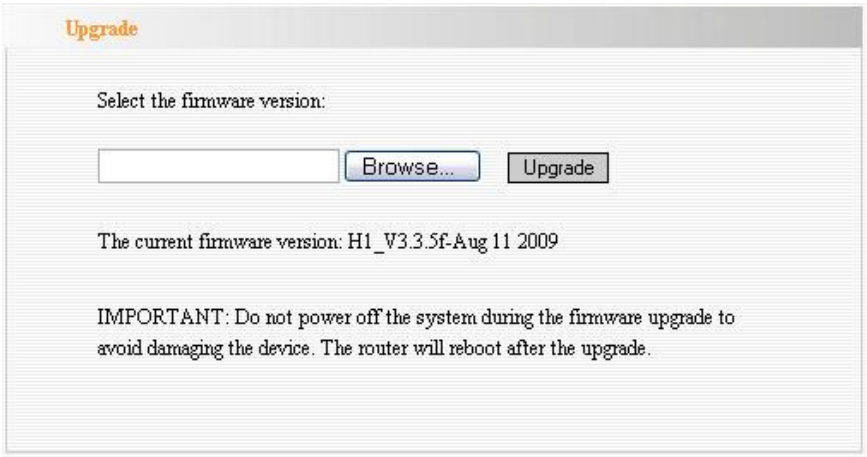


- **DDNS:** Select one button to enable or disable the DDNS service.
- **Service Provider:** Select one from the drop-down menu and press ***Sign up*** for registration.
- **User Name:** Enter the same user name as the registration name.
- **Password:** Enter the password you set.
- **Domain Name:** Enter the domain name which is optional.

Backup/Restore

- **Backup:** Click to back up ZSR4154WS's configurations.
- **Browse:** Click to browse the path where you want to save files.
- **Restore:** Click to restore ZSR4154WS's configurations.

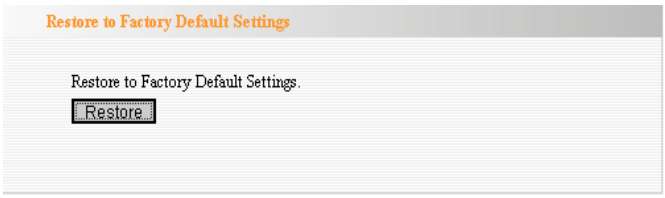
Firmware Upgrade


Upgrade
Select the firmware version:
Browse...
Upgrade
The current firmware version: H1_V3.3.5f-Aug 11 2009
IMPORTANT: Do not power off the system during the firmware upgrade to avoid damaging the device. The router will reboot after the upgrade.

- **Browse:** Click to browse the path to the upgraded firmware files.
- **Upgrade:** Click to start upgrade.

IMPORTANT: *Do not power off the system during the firmware upgrade to avoid damaging. ZSR4154WS will reboot automatically after the upgrade.*

Restore to Factory Default Settings

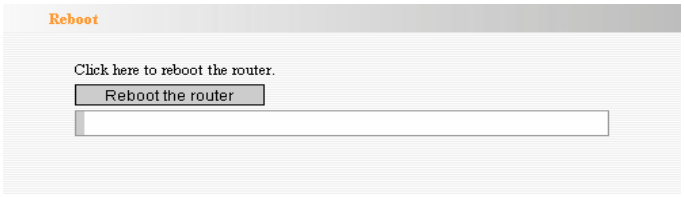


- **Restore to Factory Default Settings:** Click to restore to default settings.

Factory Default Settings:
User Name: **admin**
Password: **admin**
IP Address: **192.168.0.1**
Subnet Mask: **255.255.255.0**

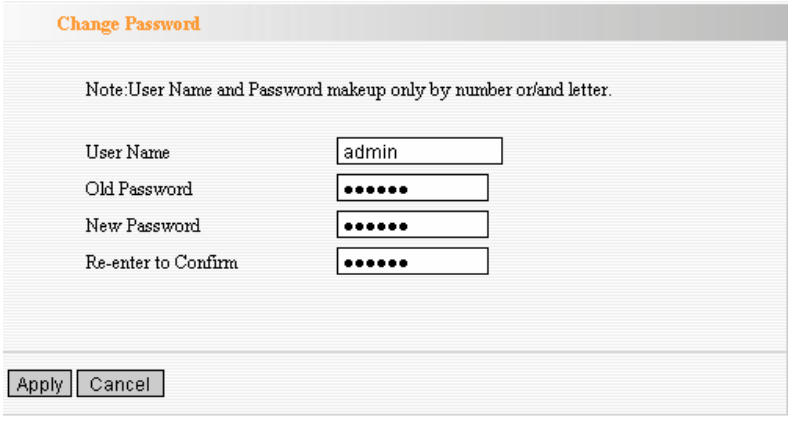
NOTE: *After restoring to default settings, please reboot ZSR4154WS so the settings will take effect.*

Reboot



- **Reboot the router:** Click to reboot ZSR4154WS.

Change Password

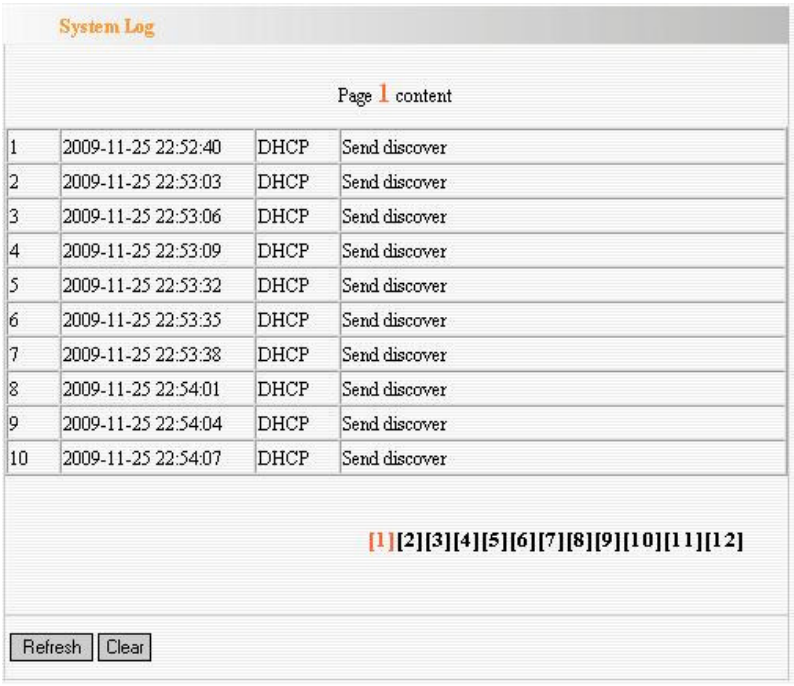


- **User Name:** Enter a new user name.
- **Old Password:** Enter the old password.
- **New Password:** Enter a new password less than 14 characters.
- **Re-enter to Confirm:** Re-enter to confirm the new password.

NOTE: *It is highly recommended to change the password to secure your network and ZSR4154WS.*

System Log

If the log is over 150 records, it will clear them automatically.


System Log
Page 1 content
1 2009-11-25 22:52:40 DHCP Send discover
2 2009-11-25 22:53:03 DHCP Send discover
3 2009-11-25 22:53:06 DHCP Send discover
4 2009-11-25 22:53:09 DHCP Send discover
5 2009-11-25 22:53:32 DHCP Send discover
6 2009-11-25 22:53:35 DHCP Send discover
7 2009-11-25 22:53:38 DHCP Send discover
8 2009-11-25 22:54:01 DHCP Send discover
9 2009-11-25 22:54:04 DHCP Send discover
10 2009-11-25 22:54:07 DHCP Send discover
[1][2][3][4][5][6][7][8][9][10][11][12]
Refresh
Clear

- **Refresh:** Click to update the log.
- **Clear:** Click to clear the current shown log.

Appendix 1: Product Features & Specifications

Features:

- Integrates router, wireless access point, four-port switch and firewall in one
- Complies with IEEE802.11n, IEEE802.11b and IEEE802.11g standards
- MIMO technology utilizes reflection signal to increase eight times transmission distance of original
- 802.11g standard and reduces the "dead spots" in the wireless coverage area
- Provides 150Mbps receiving rate and 150Mbps sending rate
- Supports WMM for Multimedia Applications with Quality of Service in Wi-Fi® Networks
- Supports 64/128-bit WEP, WPA, WPA2 encryption
- WPS (Wi-Fi Protected Setup) simplify the security setup and management of Wi-Fi networks.
- Supports remote Web management
- Supports wireless Roaming technology and ensures high-efficient wireless connections
- Supports wireless SSID stealth mode and MAC address access control
- Supports Auto MDI/MDIX
- Provides system log to record the status of the router
- Supports MAC address filtering, NAT, NAPT
- Supports UPnP
- Supports DHCP server/client
- Supports SNTP
- Supports virtual server and DMZ host
- Supports auto wireless channel selection
- Supports WDS function (wireless distribution system)
- Supports QoS function

Specifications:

Standards	IEEE 802.11n, IEEE 802.11g, IEEE 802.11b standards
OS	Windows 2000, XP, Vista, 7; Linux
User interface	Easy to use user configuration software
Transmit distance	Indoor up to 100m ; Outdoor up to 400m (limited to environment)
roaming	Support multipoint auto roaming and configuration; Support wireless network environments auto detect.
LED	LAN 1-4/WAN/WLAN/WPS/SYS/POWER
Antenna type	One detachable antenna
Frequency range	2.4GHz ~ 2.4835GHZ
Radio data rate	11n: 150/130/117/104/78/52/39/26/13Mbps 65/58.5/52/39/26/19.5/13/6.5Mbps 11g: 54/48/36/24/18/12/9/6Mbps 11b: 11/5.5/2/1Mbps
Modulation	OFDM, CCK, BPSK, QPSK
Spectrum Spread Technology	DSSS
Sensitivity	11n 20MHz/40MHz: -65dBm 54Mbps: -72dBm 11Mbps: -88dBm
Antenna Gain	3dBi
Transmission Rate	17dBm
Power	9V 1A
Max. Consumption	6W
Flash	2M Bytes
System Memory	16M Bytes
MAC Address Entry	1K
Channels	11 Channels (USA, Canada) ; 13 Channels (Europe)
Media Access Protocol	WMM
Data security	WPA/WPA2; 64/128-bit WEP; TKIP/AES
Operation Temp.	0ºC ~ 40ºC
Storage Temp.	-20ºC ~ 70ºC
Operation Humidity	10%~90% RH no condensing
Operation Humidity	5%~90% RH no condensing
Dimension (L x W x H)	160mm x 102mm x 33mm
Weight	205g

Appendix 2: Troubleshooting

Q1. I Can not login to the Web interface of ZSR4154WS after entering the IP address in the address field?

Step 1: check ZSR4154WS if it works well. Once the device is powered on for a few seconds, the SYS indicator on the panel will be turned on. If it is not, please contact us.

Step 2: check the network cable if it is work and the corresponding indicator is "Always ON". Sometimes, the indicator is "Always ON", but it does not mean it gets through.

Step 3: Run "Ping" command and check if it can ping ZSR4154WS's LAN IP address 192.168.0.1. If it is OK, please make sure your browser does not access the Internet by proxy server. If the ping fails, you can press the "RESET" button for 7 seconds to restore to default settings. And then repeat the ping operation. If it still does not work, please contact us.

Q2. I forget the login password and can not enter the setting page. What can I do?

Press the "RESET" button for 7 seconds to restore ZSR4154WS to default settings.

Q3. The computer connected with ZSR4154WS shows IP address conflict. What can I do?

Check if there are other DHCP servers in the LAN. If there have, disable them. The default IP address of ZSR4154WS is 192.168.0.1 and please maker sure the address is not occupied by other devices. If there are two computers with the same IP addresses, please modify one.

Q4. I can not use E-mail and access the Internet. What can I do?

It happens in ADSL connection and Dynamic IP users. And you need modify the default MTU value (1492). Please in the "WAN Setting" modify the MTU value with the recommended value as 1450 or 1400.

Q5. How to configure and access the Internet via Dynamic IP?

In Setup Wizard of the Web utility interface, select "Dynamic IP" connection type and click "Save" to activate it. As some ISPs bind the user computer's MAC address, you need to clone ZSR4154WS's WAN MAC address to the binding PC's MAC address. Select "MAC Address Clone" in "Advanced Setting" to input your computer's MAC address and click "Apply" to activate it.

Q6. How to share my computer's source with other users in Internet?

If you want Internet users to access the internal server via ZSR4154WS such as e-mail server, Web, FTP, you can configure the "Virtual Server" to come true.

Step 1: create your internal server, make sure the LAN users can access these servers and know related service port. For example, Web server's port is 80; FTP is 21; SMTP is 25 and POP3 is 110.

Step 2: in the Router's web click "Virtual Server" and select "Single Port Forwarding".

Step 3: input the external service port given by the Router, for example, 80.

Step 4: input the internal Web service port, for example, 80.

Step 5: Input the internal server's IP address. If your Web server's IP address is 192.168.0.10, please input it.

Step 6: select the communication protocol used by your internal host: TCP, UDP, ICMP.

Step 7: click "Apply" to activate the settings.

Q7. How to connect Xbox360 and PlayStation to ZSR4134WE?

You must obtain a Static IP address from your ISP. Follow the instruction in the CD ROM filename ***Xbox360.pdf*** and setup your game console properly. After you have successfully configured your game console, you have to open ports from the ZSR4154WS to allow two way communications. For more information on port forwarding instruction, please refer this user manual to Chapter 8.

The following table has listed the well-known application and service port:

Server	Protocol	Service Port
WEB Server	TCP	80
FTP Server	TCP	21
Telnet	TCP	23
NetMeeting	TCP	1503、1720
MSN Messenger	TCP/UDP	File Send:6891-6900(TCP) Voice:1863 、6901(TCP) Voice:1863 、5190(UDP)
PPTP VPN	TCP	1723
Iphone5.0	TCP	22555
SMTP	TCP	25
POP3	TCP	110